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Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Stories of the Week
Gag of the Week
Refrigeration to the Rescue —from Brains to Atoms
You Meet Interesting People
Other Worlds Than Ours
Senses We Don't Use
Westinghouse Takes ESP Seriously

Stories of the Week

This is a true story. Neighbor of ours complained about the late hours her teen-agers kept. Always her out-of-the-nest children worried her. Never could tell what might happen to them, she fussed and fumed.

Particularly was she upset when her 17-year-old daughter announced that she might not get home from a high school dance until time for breakfast next morning.

"Why, when I was your age . . ." her mother raged.

"Don't panic, mother," interrupted Linda. "When you were *my* age, I was already three months old."

Instead of washing out his mouth with soap, bitsy Billy's mother ordered him to pack his bag and leave home.

"And don't come back," she warned, "until you pledge to quit swearing."

Hour later the boy still was on the front porch.

"Now," tight-lipped Mother, "are you ready to promise?"

"Not yet," Billy ruffled his hair. "I've been wondering where in the hell I could go."

"During all these years," an old lady was queried on her golden wedding anniversary, "have you ever thought of divorce?"

"No," she replied, "only murder."

Gag of the Week

Sign of the times in the window of a Milwaukee tavern:

"Nerves Restrung While-U-Wait."

Refrigeration to the Rescue —from Brains to Atoms

There seems to be no end to discoveries of refrigeration's usefulness. Consider these two widely separated applications:

Item One. Doctors at John Hopkins university hospital testify that refrigeration can prevent permanent brain dam-

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First Reports Are Good

NWAHACA Studies 'Silver Shield'

By C. Dale Mericle

CLEVELAND — With a fast-moving production featuring professional actors in the main, most of the 45th annual convention of the National Warm Air Heating & Air Conditioning Association held here Dec. 4 and 5 was devoted to its Silver Shield program designed to upgrade heating, cooling, and year-round systems.

This was the first national presentation of the program following its initial airing as a suggested association undertaking before the group's convention last year.

There was much interest in the favorable progress report presented by members of the Kalamazoo (Mich.) Indoor Comfort Bureau, which put the Silver Shield program into actual operation July 25 and is still the only local bureau as yet licensed under the program.

All 12 members of the Kalamazoo bureau have made Silver Shield installations, which account for 60% of one contractor's jobs, the members said. One building contractor now insists on Silver Shield systems for the homes he builds, and

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No Secret
Cooling Going In at Calif. Missile Base

LOMPOC, Calif. — Comfort conditioning of the new missile control and launching operational buildings at Vandenberg Air Force Base here will be done by Drayer-Hanson multi-zone and single-zone units, C. W. Pollock, manager of air conditioning and refrigeration for Drayer-Hanson, has announced.

Press reports say that test firings of missiles may start here soon. Both this site and the Point Arguello range have been designated as maximum security areas.

Pollock said that the now completed missile guidance and nose cone facilities, presumably part of the core of the multi-million dollar Atlas ICBM launching tower, constitute a second step in the air conditioning phase.

Drayer-Hanson has already provided comfort conditioning for 90% of the officers' quarters through concealed, suspended, and console room units.

Units were supplied by Air Conditioning Supply Co., Los Angeles, and installed by Stanley Feuer Co., Climate Conditioning Corp., and Main Cornice, Inc., all air conditioning contractors in Los Angeles.

Merger of ASHAE-ASRE Underway
Officers Expect O.K. From New York State

By Phil B. Redeker

NEW ORLEANS—With the merger of the American Society of Heating & Air-Conditioning Engineers, and the American Society of Refrigerating Engineers, officially "voted in" by the necessary majorities of the members of both societies, officers of the two groups met here to get under way the steps necessary to complete the consolidation of the two organizations.

The merger will not be consummated officially until the New York state supreme court and some of the N.Y. state administrative agencies okay it, but officers of both societies believe this to be only a formality, and are going ahead with steps which will make the new society (to be known as the American Society of Heating, Refrigerating & Air-Conditioning Engineers, Inc. (ASHRAE) a going institution.

Immediately following the recording of the votes at the special ASHAE meeting in Chicago, ASHAE President E. R. Queer, 1st Vice President A. J. Hess, and Secretary A. V. Hutchinson traveled to New Orleans to meet with ASRE President Cecil Boling and other ASRE officers who were in attendance at the semiannual meeting of the ASRE.

Boling, in announcing the re-

(Concluded on Page 25, Col. 1)

NHAW Considers Resolution on 5-Yr. Warranty

By C. Dale Mericle

CLEVELAND — A proposed resolution asking manufacturers to drop the five-year warranty in favor of a single year plan will be studied in the coming months by the National Heating & Airconditioning Wholesalers Association and acted upon at the group's next national meeting in Los Angeles May 11 and 12, it was decided by the board of trustees following the 12th annual fall convention held at the Statler-Hilton hotel here Dec. 1 to 3.

The proposed resolution was presented before the convention on behalf of the NHAW air conditioning committee by its national chairman, R. W. Allen of Atlas Supply Co., Winston-Salem, N. C.

There was little discussion of the proposal in the general membership meeting, and it was referred to the board.

In another move the association has established a committee to discuss with control manufacturers a problem arising from original equipment manufacturers' allegedly buying excessive quantities of controls to obtain lowest possible prices and then "dumping" the excess to dealers or preferred outlets at a price below the average wholesaler's cost.

In addition to the general business meeting, committee meetings, and conference program with manufacturers, highlights of the convention were two "workshop" panel sessions —one on wholesaler policy problems and the other on cost of services.

The policy session, it was explained by A. M. Vorys, national chairman of the distribution policy committee, developed out of action taken a year ago by NHAW when it adopted a resolution requesting manufacturers to outline their policy in writing for the association.

Manufacturers pointed out that the wholesalers did not have a clearly defined distribution policy for themselves, Vorys declared.

Thoughts aired in this workshop panel will guide NHAW in setting up a statement of wholesaler policy and code of ethics, he indicated, covering such questions as a wholesaler's handling lines competitive with one he has on an exclusive basis,

(Concluded on Back Page, Col. 1)

Carrier Introduces 70-Lb. Portable 1-Hp. Room Unit

SYRACUSE, N. Y.—A new 1-hp. portable air conditioner that weighs approximately 70 lbs. has been added by Carrier Corp. to its room air conditioner line.

Carrier's 1959 line, shown at four field meetings earlier this month, also includes a 60-lb. portable, a smaller heat pump model, and two series of regular units.

Like the smaller portable, the new model performs three ways —as a cooling unit, a heat pump, or a dehumidifier. Placed in a window for cooling, it can be reversed for heating or set in the middle of a room or basement for dehumidification.

It is made in two color combinations — mocha with sand beige grille or turquoise with colonial white grille. Automatic thermostat and airflow control that regulates the amount and direction of air circulation are features.

(Concluded on Page 25, Col. 4)

San Francisco Splits Heating, Cooling Inspector Category

SAN FRANCISCO—The industry has worked out an agreement with Lester C. Bush, superintendent of building inspection, to provide an additional inspector classification for "warm air heating and ventilating."

The classification requiring refrigeration journeyman qualifications which has been set up as "heating and refrigeration inspector" will be changed to read "refrigeration inspector."

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Whirlpool Offers New Room Unit In 3 Sizes for 1959

ST. JOSEPH, Mich.—A thermostatically controlled new air conditioner in 1, 1½, and 2-hp. sizes has been announced for 1959 by Whirlpool Corp.

The new air conditioners will be supplementary to the heavy carry-over of 1958 models, according to John A. Hurley, vice president in charge of sales. 1958 was a poor year for Whirlpool in air conditioners, he commented.

Because of this, he said, 1959 shipments of air conditioners will be less than 1958 shipments.

Elisha Gray, president, declared in a New York City press conference that Whirlpool is working on the development of a residential gas air conditioning unit.

He foresees a great future for this equipment, particularly because the gas utilities do not

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Charter New San Diego ASHAE Chapter

Attending charter ceremony for new San Diego chapter of American Society of Heating & Air-Conditioning Engineers were (l. to r.) George Dunn, chapter secretary; Arthur J. Hess, ASHAE first vice president; Elmer R. Queer, ASHAE president; W. O. Stewart, region 4 director; H. A. Smith, chapter president; Dr. N. W. Lamb of Convair-San Diego, principal speaker at the meeting; Frederick W. Hofmann, ASHAE assistant secretary; and Milt Jackson, ASHAE organizer.

Thompson Heads National Service for Airtemp

DAYTON — Appointment of Raymond J. Thompson as director-national service for Chrysler Corp.'s Airtemp Div. has been announced by J. B. Ogden, vice president-sales for the division.

Thompson held a similar post with the O. A. Sutton Corp. from 1950 until joining Airtemp in November of this year, according to the announcement.

Thompson was graduated from the University of Colorado in 1940.

Since that time he has been in the air conditioning and heating field, including service with U. S. Army Ordnance during World War II.

B-W Transfers Primor Operations to York

CHICAGO — Borg-Warner Corp. is closing its Primor Products division plant in Adrian, Mich. and transferring operations to its York Div. plant in York, Pa., it was reported.

The move is "a matter of consolidation," according to a company spokesman. He said the Adrian plant will be sold.

Marlo Working Again

ST. LOUIS—Marlo Coil Co. announced that it is now back in full operation following the ending of a nine-week strike.

Welding Information

NEW YORK CITY—An information center has been established by the American Welding Society, 33 W. 39th St. here.

Arkla To Add 6 Products In '59, Hires Anderson

EVANSVILLE, Ind. — Arkla Air Conditioning Corp. is planning to produce six and possibly eight new products sometime during 1959, Lester E. Walbridge, vice president and general manager, indicated here recently.

Dr. Anderson

At the same time, company headquarters in Little Rock, Ark. announced the appointment of Dr. Philip P. Anderson as chief engineer for Arkla.

Dr. Anderson had served in various research and engineering executive capacities with Servel, Inc. from 1936 through 1956. He is credited with nearly a score of patents in gas refrigeration and year-round air conditioning.

Since 1956 he has served as director of development for Carrier Corp. He will now work with R. K. Eskew, vice president in charge of engineering, research, and development at Evansville.

The new products Arkla will manufacture next year, according to Walbridge, are:

1. A 100-ton steam powered refrigeration unit for commercial and industrial use.
2. An add-on central air conditioner to be built in 2½, 4, and 6-ton sizes.
3. An all-year 25-ton air conditioner which would be a modification of the present 25-ton water chiller.
4. A low cost, forced draft, domestic furnace.
5. An incinerator for inside or outside installation.
6. A charcoal type broiler for indoor and outdoor use.

The two items which may be produced next year are a gas-fueled combination refrigeration and air conditioning unit and a device for heating poultry houses and brooders.

Westinghouse Adds Evaporative Cooler

SPRINGFIELD, Mass. — Westinghouse Electric Corp. is entering the evaporative cooler field with a three-model line, W. B. Massenburg, manager of the company's fan and heater department has announced.

Called "Poweraire," the portable coolers have "Tel-A-Glance" controls indicating water level, two speeds, and operate on 115-volt a.c. current.

Top of the line model PC-3 features adjustable air diffusion, 4-gal. reservoir, water shut-off valve, no-clog filter, and 2,200 f.p.m. velocity. Models PC-1 and PC-2 have 3-gal. reservoir and 1,900 and 2,000 f.p.m. velocities, respectively. Suggested list prices are: PC-1, $34.95; PC-2, $49,95; and PC-3, $64.95.

Massenburg said the evaporative cooler market is a growing one as yet untapped by a major brand name manufacturer. He considers the sales potential excellent, both in the southwest and the midwest.

PERFECTION BEYOND THE "Nth" DEGREE!
Through these dies passes the world's most perfect thin-wall tubing!
To achieve this perfection, the mandrils and dies used by Viking not only have been engineered to a degree of precision far greater than specifications require . . . but they are constantly checked to fantastically small limitations on special machinery built by Viking for this purpose.
The advanced techniques utilized by Viking naturally produce thin-wall copper tubing that is consistently superior in quality — quality that reflects itself in savings and dependability for the user. As a result, more and more manufacturers of air conditioning and refrigeration units and coils find that Viking continues to be the best source for thin-wall copper tubing.
VIKING
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PRECISION DRAWN SEAMLESS COPPER TUBE

Thinking of your future?

Expand with Chrysler Airtemp

New product developments, merchandising, advertising and dealer development programs spearhead aggressive Airtemp expansion drive.

President Paul M. Augenstein Outlines New Policies

Better Dealer Relations First Goal

"Better relations and understanding with dealers and distributors will be the first target of the new Chrysler Airtemp expansion drive already under way." Airtemp President Paul M. Augenstein emphasized that increased dealer and distributor strength and profit potential is the objective of Airtemp's revitalized merchandising program.

Full Line Expansion Under Way

"The new program covers all phases of the air conditioning and heating field. New pricing and dealer financing policies are already being developed. Expanded national and local advertising programs are ready now! New product development is being intensified to assure Airtemp dealers of a highly favorable competitive position throughout the line. Many new and advanced products are ready now and were shown at our distributor meeting on December 4."

Engineering Excellence and Experience Emphasized!

"Increased penetration in every phase of your business is our number one objective for 1959. You'll be backed by the finest engineering staff and the most modern production facilities in the industry. New product lines will give you greater coverage and more competitive advantages to sell than ever before. And you'll have the solid, well-deserved Chrysler reputation for quality and engineering excellence behind every product in the line. As a member of the aggressive Chrysler Airtemp dealer organization you can quickly convert these advantages to increased sales and profits."

New Products to be Shown at Distributor Meeting

Distributors had their first look at the results of the accelerated Airtemp development program on Dec. 4 when they attended the Airtemp National Business Conference in Dayton. The new products include an expanded line of room air conditioners, a new development in air purification systems for central home air conditioning, an expanded line of warm air furnaces, plus a large number of new products for commercial applications. This year, more than ever before, Airtemp dealers will have more to show, more to sell.

"This is the start of a new era for Airtemp, its dealers and distributors. As a Chrysler Airtemp franchised dealer you will have everything that's needed to achieve a position of dominance and leadership in the air conditioning field. Investigate the greater potential of an Airtemp franchise now . . . you'll see the profit advantages when you do."

Paul M. Augenstein, President, Airtemp Division, Chrysler Corporation.

For a profitable future think of Chrysler Airtemp. Get in touch With your local Airtemp Distributor NOW . . . or write Airtemp Div., Chrysler Corporation, Dayton 1, Ohio, for the complete franchise proposition.

CHRYSLER
AIRTEMP

FIRST WITH THE FINEST IN AIR CONDITIONING

Sues Retires, Young Appointed President

LOS ANGELES — E. E. Young has been appointed president of Sues, Young & Brown, Inc., independent distributor of Typhoon air conditioners and Zenith products.

M. G. Sues, the former president, has retired from the business to assume active management of his ranching interests.

E. E. Young was co-founder of Sues, Young & Brown and has been the company's secretary-treasurer.

Other new appointments are R. F. Young as secretary-treasurer and J. M. Sues as vice president in charge of advertising.

Clarence Brown, vice president, and E. J. Dymek, vice president in charge of sales, remain as officers of the company, according to the announcement.

Whirlpool--

(Concluded from Page 1, Col. 5)

have the peak load problems that electric utilities have.

While Whirlpool follows the policy of introducing new models only when there is technical or market justification, it is bowing a complete new line of refrigerators for 1959.

Three of the 11 new refrigerators will feature a "Jet-Cold" shelf. This is a hollow shelf in the center of the food preservation compartment. A stream of cold air is forced through it to provide even cold all through the compartment, even in the door shelves.

Hurley said the shelf is the first domestic device, to his knowledge, that cools by all three methods of refrigeration —convection, conduction, and radiation.

All the 1959 refrigerators will feature the square look. Prices will reflect a minimum increase, Hurley said.

WHIRLPOOL's 1959 Custom model.

Hurley recalled that the company introduced its first gas refrigerator in May. Despite the recession, he said, the company will meet its first year sales goals and expects a 50% increase next year.

He expects a completely new gas refrigerator to appear on the market in 1960.

The new "Custom" conditioner has three dials permitting the user to select ventilation or exhaust with or without cooling. Fan speed can be adjusted to high or low. Five adjustable air direction grilles direct air flow to any part of the room.

Only slightly more than 2 ft. wide and less than 18 in. high, the Custom is designed for installation in any window 27 to 40 in. wide. A disposable glass filter is easily removed.

Colored "Sea Mist" green, the Custom air conditioner is available in a 1-hp. unit for 115-volt operation and 1, 1½, and 2 hp. for 230-volt operation.

Other RCA Whirlpool room air conditioners include three "Imperial" units with illuminated picture panel, two low-cost "Deluxe" models, and the 115-volt, 1-hp. "Flamingo."

Hurley anticipated that Whirlpool's over-all sales would run 15 to 20% over 1958.

FIRST ELECTRIC refrigerator with "Jet-Cold" shelf and "Icemagic" automatic ice maker is the RCA Whirlpool 13-cu. ft. Imperial. Jet-Cold is hollow shelf in center of refrigerator.

Order 3 Hammond Firms to Retract Union Recognition

WASHINGTON, D. C. — The National Labor Relations Board has ordered three Hammond, Ind. heating and plumbing firms to withdraw all recognition from the Christian Labor Association as representative of any of their employes, unless and until the organization demonstrates its exclusive majority representative status pursuant to a board-conducted election among companies' employes.

Named in the order were Meyer's Heating & Appliance Co., Hammond Furnace Supply Co., and Meyer's Plumbing, Inc.

Charges were filed by Local 697, IBEW, AFL-CIO; Local 303, Sheet Metal Workers, AFL-CIO; and Local 307, Plumbers, AFL-CIO. An all-party stipulation was entered into in September and approved by the NLRB in November.

The NLRB also ordered the firms to:

1. Completely disestablish Independent Craftsmen's Union as representative of any of their employes.

2. Cease discouraging membership in the charging parties, interrogating employes as to their union or concerted activity, reprimanding and threatening employes with economic harm for engaging in union or concerted activities, encouraging, directing, or assisting employes in starting decertification procedures, or seeking to determine through lie detector tests the action or attitude of employes on union activities.

3. Offer reinstatement and back pay to four employes and back pay to another.

4. Post compliance notices for 60 days.

Why not be kind to yourself this Christmas and give yourself all the advantages that a dependable parts and tubing source can give. When temper and grain size are *always* as ordered, when O.D's, wall thicknesses and other specifications are *strictly* adhered to *every time*, the quality of your product is bound to increase while production delays and after-the-sale servicing are sure to be reduced. So why wait. Call your nearest H & H representative for the whole story, today.

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BHC Claims Gains In Hydronics Sales; Increased Promotion Planned for '59

NEW YORK CITY — How local and national efforts to boost the sale of hydronic heating systems in the residential market have already chalked up definite gains highlighted the third annual meeting of the Better Heating-Cooling Council here, where the 1959 program of the group was also outlined.

Outstanding progress in Milwaukee was reported by John W. McIntosh, president of the Wisconsin BHC council, in a luncheon address, who cited several promotions this group had organized.

First of these was the installation of a hydronic system in the Milwaukee Home Show home, said McIntosh, who is district manager of National-U. S. Radiator Corp. This resulted in several sales, he declared.

A month later the local council had eight hydronic heating installations in the Milwaukee Parade of Homes and converted one builder to hydronic systems exclusively, McIntosh revealed.

Getting council members to staff the model homes of local builders and act as salesmen for hydronics is one of the best ways of finding more business, he advised.

"We got innumerable inquiries, and we also got several dozen contracts," McIntosh declared. "We are no longer just tolerated, we have arrived. We are now serious contenders for the builder's business, and the public is becoming well acquainted with the merits of hydronic heating," he concluded.

The Wisconsin BHC council consists of local contractors, wholesalers, and manufacturers' representatives. Similar local groups have been organized in Cleveland and Chicago, and others are currently being organized, notably in Philadelphia. Under discussion are councils in Long Island, Minneapolis, San Francisco, Portland, Denver, St. Louis, and Los Angeles.

Thus far the efforts of the national and local councils have been largely concentrated on residential heating, although more attention will be directed to the commercial field in the coming year, it was indicated.

Not much has been done with residential cooling for the simple reason that the hydronics industry doesn't have much to offer here, it was generally admitted at the meeting. The current trend to baseboard radiation in homes does not lend itself to chilled water systems for cooling, which obviously require forced convectors to circulate cooled air within the space.

Some members of the national council, in fact, unofficially believe the residential cooling answer for a hydronic heating system is an attic type air conditioner.

Continuing its present efforts, the BHC council in 1959 will also be concentrating on two new programs designed to provide promotional support in the commercial and industrial fields and the area of distribution.

First of these new programs is a campaign which will promote hot water and steam heating and cooling for commercial, institutional, and industrial buildings—where hydronics has always been strong but recently has been losing some ground to warm air and electric heat.

To make the most of this program, the BHC council hopes to enlist the cooperation and support of non-member manufacturers of boilers and accessories who sell primarily in the commercial and industrial fields.

The second new program is aimed at helping wholesalers increase their hydronics business and profits through close cooperation with the group. The plan calls for wholesalers to make use of a full-time specialist on the BHC council payroll to promote hydronic sales through and in cooperation with contractors in both new construction and remodeling fields.

First step in the latter program is a survey, which is now under way, to determine what promotional aids and assistance wholesalers want and need from the national council.

Continued support and participation in the national Women's Conference on Housing is programmed for 1959. The council is a member of the United Industry Committee on Housing. A permanent display on hydronics has been created and will be maintained in the National Housing Center in Washington, D. C.

A complete hydronics sales promotion kit has been prepared which dovetails with the sales training program of the National Association of Home Builders.

NEW Homebuilder Sales Kit produced by the Better Heating-Cooling Council for builders contains a lawn sign, inside-the-house adhesive signs, a hydronic handbook to be used by house salesman as a heating guide, and a consumer booklet, "Heart of the House." Kit is free to builders.

The kit includes: (1) a three-color lawn sign reading, "This Home Features 'heart of the house' Hydronic Heating," (2) a number of duplicate small interior signs, (3) a home salesman's hydronic handbook, and (4) the "Heart of the House" booklet guide to heating and cooling.

Setting up of a speakers bureau to provide speakers on hydronics for local builder association meetings has been completed.

Also available for this purpose are copies of the council's promotional film "You Earth People." Between July and September of this past year this movie was seen by a television audience estimated at 1,500,000. Increased distribution of the film is planned for 1959.

SO HALSTEAD & MITCHELL ENGINEERS SAID:

When Gross Profits Depend on Refrigeration...

Over 50% of the gross profit of the average supermarket comes from refrigerated items. Naturally, the refrigeration system has to be *dependable* . . . which is why so many supermarkets specify Halstead & Mitchell *Cleanable* Water-Cooled Condensers. In fact, all types of stores relying on refrigeration units are insisting more and more on H & M Condensers. Here's why:

H & M Water-Cooled Condensers operate quietly, and give full capacity even on the hottest days or in crowded equipment rooms. Condenser headers can be removed easily for quick, thorough, mechanical cleaning of the water tubes. Scale and sludge, which reduce heat transfer, are removed without harmful chemical cleaners. Operating costs *stay* lower.

No matter what brand compressors you use, insist on H & M's *Cleanable* Water-Cooled Condensers.

There's a matching Halstead & Mitchell Cooling Tower for all refrigeration and air conditioning applications: sturdy, weatherized, propeller fan models for outside installations; quiet, centrifugal fan models for indoor installations with long duct runs. Take-apart models are available for problem installations.

Ask for all Halstead & Mitchell products at your nearby distributor's or write for descriptive literature—Halstead & Mitchell, Bessemer Building, Pittsburgh 22, Pa.

Halstead & Mitchell

WATER-COOLED CONDENSERS • COOLING TOWERS
AIR-COOLED CONDENSERS • FINNED-SURFACE COILS

The exciting Attaché . . . exquisite new resort on Hollywood Beach. 200 rooms.

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5 OUT OF 6 LUXURY WESTINGHOUSE AIR

Here's where reputation and product quality make the difference..

No coincidence, this . . . five out of six luxury hotels chose Westinghouse. Miami Air Conditioning, Inc., the contractor . . . Westinghouse, the manufacturer—offered the quality, the performance and the service demanded by profit-minded owners. Westinghouse's complete, flexible line of packaged and applied equipment, installed by professional air conditioning specialists, forms a profit partnership unmatched in the industry. Wouldn't you like to have your good name associated with the nationally famous name of Westinghouse?

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YOU CAN BE SURE...IF IT'S Westinghouse

WATCH "WESTINGHOUSE LUCILLE BALL-DESI ARNAZ SHOWS" CBS TV MONDAYS

The luxurious Aristocrat . . . a winter paradise for pleasure seekers . . . Hollywood Beach. 175 rooms.

The fabulous Saxony in Miami Beach . . . with its "tower of glass" Westinghouse elevator. 446 rooms.

HOTELS CHOOSE CONDITIONING

The magnificent Moulin Rouge . . . 100-room resort adding to the splendor of Miami Beach.

A touch of Paris in a tropical paradise . . . the Montmartre in Miami Beach. 300 rooms.

AIR CONDITIONING DIVISION • WESTINGHOUSE ELECTRIC CORPORATION, STAUNTON, VIRGINIA

Inside Dope

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

age during surgery cases wherein heart action is stopped, then restarted.

Normally, in such an operation, some brain cells die when blood supply is interrupted. With refrigeration (reducing body temperature 8°) this doesn't occur.

Item Two. Refrigeration reduces repair costs for the Argonne National Laboratory's experimental atomic reactor. Problem is preventing leakage of radioactive wastes when any part of the reactor has to be removed.

Hitherto, repairers needed to draw all water from the core and fish out radioactive fuel elements before starting work. That process, plus reloading, took from 10 to 12 days.

New method simply freezes low ends of the control rod thimbles (pipes leading to the control rod drive mechanism). That frigid action forms an ice dam which effectively prevents radioactive wastes from leaking out of the core.

Nowadays, thanks to refrigeration, repairs on these atomic experiments can be completed within hours.

You Meet Interesting People

There's a bonus to air travel which American, United, Pan-Am, etc. don't advertise. (Maybe they should. Free idea, fellows—in case any advertising agency readers of "Inside Dope" have airline accounts.)

That bonus is the natural intimacy which seatmates accept as "part of the game." You get acquainted quickly and easily with your partner, almost from the moment you fasten your seat-belts. In a whisk you're bosom-buddies, and exchanging snapshots of your children.

Nearly every air traveller is going somewhere on business. His mission generally is interesting, because all business is interesting. And that makes *him* interesting.

Also, he has the feeling that "I'll probably never see this guy again" (a good bet) so he confides to his airplane seatmate things he'd never dream of revealing to a man met casually anywhere else.

We give you two recent examples from our own travel diary: a wise Catholic missionary to Ceylon, and a hypersensitive young man who has been blind all his life.

Other Worlds Than Ours

That missionary we met on an airplane was a German-born French citizen. He had educated himself in Italy and in Ceylon. In the latter large exotic island, which perspires near the coast of India, he learned to read and write English, Singahalese, and Tamil.

Also he learned, rather quickly, that the Ceylonese live in a different world—one quite unlike ours in motivation and aspirations.

It was at his mission, incidentally, that the wondrously exciting movie, "The Bridge on the River Kwai," was filmed.

His complaint about that: as soon as the British and American actors finished work each day they retired to their private little domiciles. They made no attempt to learn anything about the Ceylonese or their culture.

"How typically British and American," he remarked. "No wonder we are losing the cold war to Communists."

Here is a man who is dedicating his life to fighting off the inroads of Communism in his bailiwick. He considers British and American governmental outpost representatives—dedicated to the same proposition—to be asinine bunglers, in contrast to their Russian and Chinese competitors.

Example: America quit buying Ceylonese raw rubber, after synthetic factories supplanted so much of our needs for the natural stuff. This situation hurt the Ceylonese economy badly.

So what did our State Dept. do? Sent them five shiploads of rice—which they needed like America needs more wheat or corn.

Rice and rubber, along with tea, are Ceylon's export surplus commodities, as any junior high school student of geography knows, or as any State Dept. flunkie could learn by looking up Ceylon in an encyclopedia.

Senses We Don't Use

Aforesaid Catholic missionary's report on our foreign aid activities may evoke the adjective, "senseless," in your mind. What the blind lad—another recent airplane seatmate—taught us was that human beings probably possess senses they've never even tried to use.

With three deft and slight touches he guessed "Dope's" weight as 185 pounds. Actually, it's 184. He asked us to concentrate on our destination, our age, and our home state. Within moments he guessed all three correctly.

(How he figured the destination we shan't attempt to guess. Voice inflections, he said, revealed our age and home state.)

He repeated what people in seats far up front were talking about. This we didn't dare check. You see (wrong verb, perhaps) he could hear conversations all over the plane which were inaudible to "Dope's" ears.

He claims that there are moments when, in a flash, he can divine in advance something that will happen tomorrow or next week. We weren't disposed to argue.

Dr. J. B. Rhine of Duke university has conducted scientifically controlled experiments in "extrasensory perception" over a period of two decades. These experiments prove conclusively that there *are* people who can transfer thoughts, read minds, receive accurate premonitions, etc.

Yogis in India have been doing things like that for centuries.

Now comes the eminently practical Westinghouse Electric Corp. with an announcement that its Research Laboratories are trying to pin down such phenomena for commercial purposes. (More about this later.)

Perhaps blind people, in their enforced solitude, can develop latent senses—if they have the will and the interest to do so.

Westinghouse Takes ESP Seriously

And now, here we go again.

Dr. Peter A. Castruccio, director of the Westinghouse Astronautics Institute, reveals that scientists under his direction are working on commercial possibilities of ESP (extra-sensory perception).

He is convinced that brain-to-brain telepathy, for example, is real.

Telepathy is instantaneously sent and received. In comparison, the fastest movements known to scientists are light and radio waves, which travel more than 186,000 miles a second.

Also, thought waves do not weaken with distance, according to ESP believers and demonstrators.

ESP is divided into five areas. In addition to the abovementioned telepathy there is clairvoyance—which is described by Dr. Castruccio as seeing things that are out of sight, like an object on the other side of a brick wall.

Westinghouse's interest lies chiefly in these two areas, he reveals.

The other three ESP areas are precognition (seeing into the future), post-cognition (seeing into the past), and psychokinesis (in which objects are moved by thought).

A recent stage play, "Visit to a Small Planet," demonstrated psychokinesis amusingly.

Castruccio thoroughly investigated evidence in support of ESP for two years before instituting the Westinghouse scientific research program. He is a Ph. D in electrical engineering.

We shall await further news with interest.

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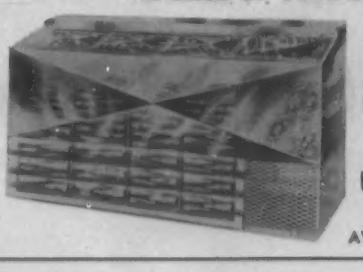

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SAINT CAJETAN is said to be Chicago's first air conditioned Catholic church. At right is one of two small altar areas, showing supply air grille at upper right and return grille at upper left.

TWO Kramer Trenton Unicons are located on the church roof, each connected to a Frigidaire 15-hp. packaged unit.

4 Insurance Buildings Get Dual-Duct High Velocity Heating, Cooling Systems

NEW YORK CITY—Illustrating the increasingly popular and versatile nature of dual-duct high velocity heating and air conditioning systems is a string of four insurance buildings handled in rapid succession recently by Buensod-Stacey, Inc., the company reported.

The manufacturer of dual-duct air mixing units began more than 20 years ago as specialist in precision air conditioning, it was pointed out. Since then the company has completed installations in structures ranging from Rockefeller Center to the City-County building in Detroit.

Dual-duct equipment is equally adaptable to new structures and renovations in existing structures, according to Buensod-Stacey. In the new Liberty Life Insurance Co. building in Greenville, S. C., 187 air mixing units heat and cool air.

The home office building of American Mutual Liability Insurance Co. in Wakesfield, Mass. required 300 units. Special requirement in this structure, which houses general offices in the first two stories and executive offices in a penthouse, was separate treatment for tropical gardens, capable of providing heating and ventilating with individual space control. Flexibility of the system was also especially suitable as future relocations of many partitions was envisioned, it was stated.

"More tricky," the report continued, "were two insurance buildings which contracted for dual-duct installed during interior renovations. In Hartford, Conn. installation in four upper floors of the tower section of the Travelers Insurance Co. building was engineered to fit into existing structural facilities.

"In the American Insurance Co. building in Newark, N. J., an existing tower section was conditioned utilizing overhead distribution through dual-duct mixing units supplemented by existing radiation."

Gets Cooling Contract For Jackson Post Office

MEMPHIS—Shelby-Skipwith, Inc. was recently awarded a $355,274 contract to air condition the new five-story post office and Federal court house in Jackson, Miss.

Work is to be completed in six months. Lomax, North & Associates of Jackson, is consulting engineer.

Skyscrapers To Get Rooftop Heating, Cooling Plants

NEW YORK CITY—Rooftop heating and cooling plants will provide comfortable climatic conditions on a year-round basis for tenants of Tishman buildings nearing completion in Cleveland and Buffalo, according to John Tishman, vice president of Tishman Realty & Construction Co., Inc., owner-builder.

The 21-story, 300,000-sq. ft. skyscraper in Cleveland will have a cooling system capable of producing 1,130 tons of refrigeration. The 20-story, 165,-00-sq. ft. office building in Buffalo will have a double-zoned cooling system capable of producing 530 tons of refrigeration.

In both buildings, all exterior office space is to be air conditioned with a York perimeter induction system with individual thermostatic controls. The interior system is a moderate pressure all-air system with reheat coils on each floor.

The fan room, refrigeration plant, and supervisory controls, as well as a gas-fired boiler plant which produces steam for winter heating, are all located in the penthouse of the skyscrapers, providing easy access for servicing and maintenance, it was indicated. In the Buffalo building, the boiler also produces steam for summer cooling in an absorption machine.

Cosentini Associates was the consulting engineer on the heating, air conditioning, plumbing, and electrical design for both buildings, and Emery Roth & Sons the architect.

Raisler Corp. has the air conditioning contract for the Cleveland building and Quackenbush Co., Inc. has the heating, air conditioning, and ventilating contract for the Buffalo building.

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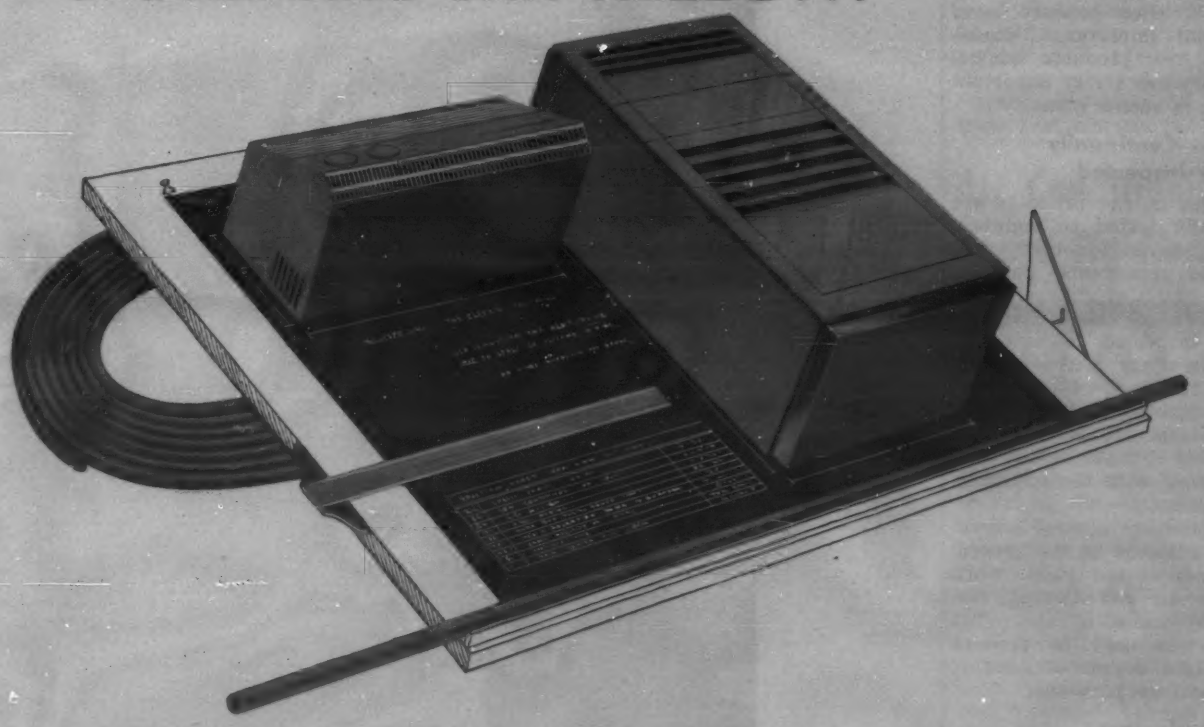

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Air Conditioning Regulates Temperature, Humidity In General Mills Test Laboratory

By Robert Greenwald
Allied Industrial Service Corp., Toledo

TOLEDO—An air conditioning system for control of temperature and humidity in a products control laboratory at the Grocery Products Div., General Mills, Inc. plant here was recently installed by Allied Industrial Service Corp. of Toledo.

Due to the high concentration of heat producing equipment in the area, the cooling load was quite high and required an unusual method of air distribution to introduce large quantities of air to cool the space.

At this plant, General Mills manufactures two major food products — cake mixes and cereals. The cake mixes are made of blended ingredients in accordance with tested recipes under the "Betty Crocker" label. The packaged cereals include Cheerios, Trix, Sugar Jets, Kix, and others.

In the manufacture of food products, the quality and purity of the finished product is of paramount importance. Consequently, the products control laboratory has a very important function in such a plant.

Samples Continually Being Inspected

Samples of the products are continually tested to maintain high standards for taste, texture, and appearance. Samples of each batch of cake mix are used to bake cakes that are rigidly inspected. Samples of every run of prepared cereal are given a thorough examination.

The ingredients that go into the products are also checked thoroughly to make certain that they accord with General Mills specifications.

The products control laboratory is adjacent to the general office area of the plant. Until the new air conditioning system was installed, the office system was used to produce some slight degree of comfort for laboratory personnel.

Heat Producing Equipment Increases

When the plant was started about five years ago, the amount of heat producing equipment in the laboratory was only a fraction of the present amount and conditions were fairly satisfactory.

Plant expansion and an increase in the number of products manufactured caused a proportional increase in the amount of equipment used in the laboratory. It soon became evident that the office system could not offset the greatly increased cooling load. It could neither supply comfort for personnel nor control room conditions.

The new system serves only the two laboratory rooms. They have a combined floor area of less than 1,600 sq. ft. But the cooling load is about 200 B.t.u.h. per sq. ft., due to the many devices with electric heating elements, three large gas-fired baking ovens, and numerous exhaust fans.

The air conditioning system has a capacity in excess of 25 tons of cooling. Air conditioning unit is a National-U.S. Radiator model SCR-25. Refrigeration cycle consists of three hermetic compressors, each individually piped to its own condenser and cooling coil circuit. Steam coil for both winter heat and summer reheat is located in the discharge duct directly above the unit.

This equipment was quickly and simply installed in an old boiler room not far from the laboratory. Supply and return air ducts pass overhead through a locker room to reach the conditioned area.

An Ingersoll Rand pump and a 50-ton Marley cooling tower, located on the roof serve both the office and laboratory systems.

In order to offset the great cooling load, the system was designed to circulate more than 8,000 c.f.m. This is equivalent to about 30 air changes an hour. Conventional grilles or diffusers could not be used effectively because of the low ceiling and many obstructions.

The author has had considerable experience with the use of perforated surfaces for air distribution which permits large quantities of air to be introduced without excessive air motion.

Therefore, the supply air

(Concluded on next page)

CAKE TESTING section of laboratory at General Mills plant in Toledo shows supply duct with acoustical material attached to bottom to reduce noise level and improve appearance. Because of high velocity, air is distributed through perforated surfaces running length of the duct. Return air grill is seen at top center.

CHEMICAL ANALYSIS and cereal testing is done in this section of laboratory. Note how duct, center foreground, blends in with beam in background. Man at right is testing dry cereal for proteins.

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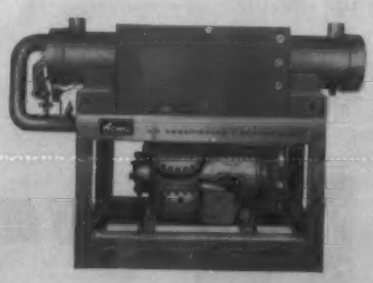

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POSING with 25-ton air conditioner are Robert Braeden, plant engineer, and Robert Greenwald, president of Allied Industrial Service Corp. Steam coil for both winter heat and summer reheat is in discharge duct immediately over unit.

BRAEDEN CHECKS electric control panel for all motors in system. At top level are instruction sheet describing operation of controls, sequence controller for cooling, and remote manual damper positioner.

General Mills Laboratory Cooling--

(Concluded from preceding page)

ducts were constructed with most vertical faces made of perforated transite. The amount of air supplied to any location can be controlled by changing the discharge through the perforated panels or by branch dampers in the ducts.

Due to the large number of exhaust fans over the hoods and ovens, a considerable amount of make-up air is required for the system. Part of the air is brought in through the air conditioning unit. Remainder is drawn from the office area. This provides for positive ventilation for the offices and also reduces the cooling load on the laboratory air conditioning system.

The controls are arranged so that the system is completely automatic after the circulating fan has been started. Minneapolis-Honeywell modulating controls are used for both cooling and heating.

Room thermostat is a two-stage control with one stage operating cooling equipment and the other operating heating equipment. Cooling stage operates a sequence controller that opens or closes the three refrigerant circuits in sequence. Water circulating pump and cooling tower fan start when cooling is required.

A thermostat in the outside air intake automatically shuts off cooling when outdoor temperature is below a set point. Manual control for remote operation of the outside and return air dampers permits easy adjustment of the amount of ventilation air desired.

At this time the system has been in operation for several months and has performed in a most satisfactory manner, reports Robert R. Braeden, plant engineer.

There have been very few complaints about drafty air distribution. Those have been readily corrected because of the flexibility in the system.

With this system, General Mills has removed some of the extraneous factors that might affect test results.

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Air Conditioning Keeps Fig Mix at Right Consistency

CINCINNATI — To keep its imported fig mix at proper consistency for baking into fig newtons, Gilt Edge Bakery Products Inc., here recently installed a 3-ton self- contained air conditioner in the fig mix storage room.

The mix must be maintained at 65° F. temperature prior to baking, explained R. N. Brown, Fedders Div. manager for Richards Electric Co. here.

At warmer temperatures it loses its consistency and firmness, making proper molding difficult, he said.

The mix is kept in a basement storage room with one exposed wall. The air cooled air conditioner is mounted through the exposed wall, which is cork insulated.

Ehlman Refrigeration Co. here made the installation for Gilt Edge.

Philip-Morris To Air Condition New Research Center

RICHMOND, Va. — A hermetic centrifugal refrigeration machine will provide cooling for the new $3 million Philip-Morris, Inc. McComas Research Center here.

A contract to supply the machine was announced by John J. Harmon, branch sales manager for Carrier Corp. It will provide a maximum capacity of 392 tons of refrigeration for temperature and humidity control in the Research Center.

The two-story building is to be completed by June, 1959.

They'll Do It Every Time

by

Jimmy Hatlo

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TESTIMONIAL advertising often is highly effective—especially if it applies to a low saturation product—and if the testimonial comes from a widely respected authority.

People don't like to get their feet wet on something the Joneses aren't using yet.

Brave souls and hardy pioneers who do venture to try something not-yet-popular (but which really is good for them, like residential air conditioning) frequently are spurred by "testimonial" recommendations to make the first purchase in their neighborhood.

Wouldn't you say that a testament from America's biggest organization—our gargantuan Department of Defense—could be a bellringer for the residential air conditioning industry? Of course!

And such a testimonial has arrived.

An "instruction" on air conditioning recently issued by the U. S. Department of Defense to all Air Force, Army, and Navy cadres encourages the air conditioning of living quarters for all military personnel in areas where hot weather saps employe efficiency *even occasionally*.

There's no doubt that the Department of Defense is the largest *American* "corporation" in existence. With an annual budget in the neighborhood of $40 billion plus, and employes numbering in the millions, this government agency is by far the biggest single employer, consumer, and creator of jobs and sales that our country ever has known.

As a "corporation" it ranks only behind the U.S.S.R., Communist China, and possibly the international Catholic Church in terms of total assets and number of employes.

Whether we like this fact or not, or whether all expenditures of the U. S. Dept. of Defense are absolutely necessary or not, are considerations beside the point of this discussion.

The point is: commanders of our military establishment recognize the *usefulness* of air conditioning above and beyond mere *comfort*.

That most people perform their daily work more efficiently in properly air conditioned quarters is a statement that few will doubt, particularly members of our industry.

That thesis has been proved over and over again in actual practice. Furthermore, employes who've become *accustomed* to air conditioning *insist* upon it, wherever they go.

Witness: No office building goes up today without it. And in New York City immense sums are being expended right now to air condition older skyscrapers. Why? Because prospective employes won't accept a job in any office there which isn't air conditioned.

If people spend eight hours per day in air conditioned working spaces, and the remaining 16 hours per day in quarters which aren't air conditioned, are the maximum benefits of air conditioned employe efficiency being achieved?

The U. S. Department of Defense thinks not.

A man who has spent a restless night in a hot, humid, non-air conditioned bedroom does a better job during working hours if his office or laboratory or shop is air conditioned. But how much more efficient would he be if he could spend all or most of his 24-hour day in air conditioned space?

Answer to this question has been supplied affirmatively to the Army, Navy, and Air Force. Their offices are air conditioned. Now they desire that their officers be air conditioned at home.

To repeat: the U. S. Department of Defense, upon whose efficiency so many millions of inhabitants of the free world depend for their continued existence, has seen fit to okay residential air conditioning for its employes.

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Although most Americans believe profits amount to about 25% of sales and would regard 10% as a "fair" profit, the actual profit per dollar of sales in American industry general averages 5% or less.—*U. S. Chamber of Commerce.*

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BEST RESEARCH ON EDUCATION THAT WE KNOW OF

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Editor:

I have been reading with much interest your articles in the field of education. I have discussed these with Phil Redeker and George Hanning, and find that there is a possibility that the NEWS may publish them in booklet form. This would be a very good thing for the industry. As you may imagine, we get many requests for information on the subject of training necessary to enter the industry, and, since we have never published any booklets or other material along these lines, we have been sometimes at a loss to provide the latest information.

If you publish these articles in booklet form, we can refer inquirers to you, or at least to your articles, which provide the result of the best research that we know of to date on this important subject.

TED KELLOGG,
Dept. of Public Relations

DR. PLANK ATTENDS MEETING IN SOVIET UNION

Karlsruhe, Germany

Editor:

It was a great pleasure for me to cooperate witih you during the conference in Australia. I certainly have followed your publication during your round the world trip, and I always admire your ability to present your impressions in such a fascinating manner.

In the meantime I visited the Soviet-Union for 4 weeks and attended an international meeting on refrigeration. From your country there were present Carl Kayan, Professor Jordan, Dr. Pentzer and a few others. It was of course very interesting to get some impressions from the present life in Russia and from the developments in industry and science. You might already have heard about this conference from your friends.

I hope to have the opportunity to meet you again at the International Congress in Copenhagen next year.

DR. R. PLANK

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Ranco Accelerates Research at New Center With 'Room-Inside-a-Room' At Pompano, Fla.

POMPANO BEACH, Fla.—An accelerated research program to help customers solve control problems got under way recently with the official opening of the new Ranco Research Center here.

Ranco makes temperature and pressure controls and valves for the air conditioning, refrigeration, automotive, and appliance industries, timers for refrigeration and laundry equipment, and starting relays with overload protection for electric motors.

ENGINEERS on the staff at the new Ranco Research Center, Pompano Beach, Fla., are administered by men with strong engineering backgrounds. Fred Greenawalt (left), director of research; E. C. Raney (center), chairman of the board; and Eldon Raney, director of the Research Center, are all actively involved in current projects.

"Although research projects are conducted at the Center in all of these fields, the naturalness of the site as an air conditioning proving ground was the most influential factor in its selection," the company explained.

"The climate is well suited to year-round testing of the type of products Ranco is developing. Florida is also the center of the move to year-round conditioning and was the first area to use reverse-cycle heating on a large scale."

"Many of the projects at the Center are confidential at the present time," it was noted. "Also in the confidential category are details on Ranco products in the research and development stage.

"Ranco engineers are also working on numerous research projects aimed at developing more efficient automatic defrosting systems for domestic and commercial refrigerators, an automatic humidity control system to provide more comfortable air conditioning without over cooling, techniques and systems for extracting heat from low temperature air to provide heat pump systems with greater efficiency and better performance.

"Air conditioning of the Research Center building isn't handled in the conventional manner," it was pointed out. "Numerous individual units provide cooling, but they are all different designs currently being tested at the Center for various manufacturers and used by Ranco as a testing ground for advanced work in zone control cooling and individual control systems.

"A new feature at the Pompano Beach headquarters building is the Test Chamber, a 'room-inside-a-room' inside the building used to develop and test air conditioning and humidity control systems.

"A full range of inside ambient air temperatures and humidities can be simulated in the outer room, while the inner room can be adjusted to simulate any outside ambient conditions from sub-zero to tropical temperatures at any desired humidity reading.

"The Test Chamber is a busy place these days as Ranco seeks to develop heat pumps which will be practical and and economical even in areas with normal sub-zero temperatures, humidity controls for comfort air conditioning and improved control systems for cooling towers, chillers, and evaporative condensers. Machine shop facilities at the Center are adequate to make all necessary samples and products for testing purposes."

Commenting on the future of heat pumps, probably the largest-scale project presently in progress at the Center, E. C. Raney said that "certain products we have developed here at the Center in cooperation with air conditioning manufacturers will insure efficient heat pumps for use anywhere in the United States."

W. A. Roosevelt Co. Celebrates 90th Yr.

LA CROSSE, Wis.—W. A. Roosevelt Co., wholesaler of refrigeration, heating, plumbing, and electrical supplies, recently celebrated its 90th anniversary, J. M. Brindley, president and general manager, reports.

W. A. Roosevelt, a cousin of Theodore Roosevelt, 26th president of the United States, founded the firm in 1868. A steamboat captain on the Mississippi, he organized the company as a steamboat supply firm.

The firm gradually expanded into other lines as it grew. It added refrigeration supplies in 1938.

For the past 40 years, it has served customers in Wisconsin, Iowa, and Minnesota from its present location at 230 N. Front St.

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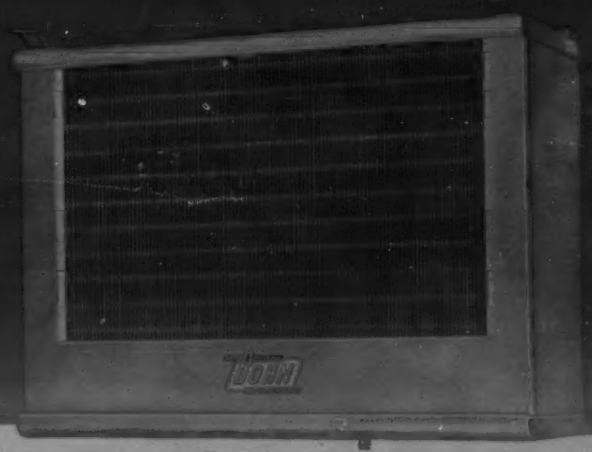

BOHN "LC" Lo-Temp Unit...

BOHN MODEL LC for large walk-ins

Only 4 Connections to Make!

INSTALLATION of the Bohn Model LC Cooling Unit in large walk-in freezers and low temperature storage rooms requires only four connections: liquid, suction, drain, and electricity. *Wiring is simple* with a clearly marked diagram on the inside of the terminal box cover. Save on installation and get this trouble-free unit of guaranteed capacity and proven quality...

WITH COMPLETE DEFROST SYSTEM BUILT-IN

Electrically heated vapor circulates by gravity through the coil in *its own hermetically sealed circuit* ... completely independent of the refrigeration circuit. The entire Vapor Hermetic Defrost Cycle is automatic... beginning at any predetermined time, ending when the frost is gone, and *automatically adjusting* to heavy or light frost loads. In 5 models with capacities from 6,000 to 24,000 BTU's per hour at 10° T. D. Write for Bulletin LT-1001.

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Buy the known line... the BOHN line

Refrigeration and Air Conditioning Products • Special Heat Transfer Surfaces

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by C. B. Ramsdell, Manager–Marketing,

Air Conditioning Department, General Electric Company

Air Conditioning

WHAT WILL SPEED ITS GROWTH?

The boom in air conditioning is bound to come!

The reason is clear. Like the automobile, travel by air, or modern kitchen appliances, air conditioning is *progress*—a means to a better life. The American consumer will always buy progress.

Why, then, hasn't the boom arrived? Because air conditioning hasn't been *sold*. Why hasn't it been sold? Because, in the battle over *price*, the concept of *value to the customer* has been lost.

We at General Electric are not waiting any longer for air conditioning to sell itself. We believe that when the consumer is convinced that the value exceeds the price, he will be satisfied—and air conditioning will gain mass acceptance. The key, therefore, is CUSTOMER SATISFACTION.

With this in view, General Electric presents its dealer program for 1959. This program will show dealers how to assure customer satisfaction—and how to reap big profits from the coming boom in air conditioning.

Good products!

General Electric's '59 program is based on the finest, most modern air conditioning equipment that money can buy—designed, engineered and manufactured to the same high standards of quality that have made General Electric the unquestioned leader in the major appliance field. There's a General Electric unit or system for every type of residential, commercial and industrial requirement—built to assure CUSTOMER SATISFACTION.

Good application, installation, service!

An extensive *technical training course* for dealers will be a major part of General Electric's '59 program. Conducted by expert factory personnel, in strategic locations throughout the United States, it will include two semesters, home study and practical work periods. The dealer who conscientiously takes this course will be a top-flight specialist in application, installation and service. He will be ideally equipped to supply CUSTOMER SATISFACTION.

Good selling!

Realizing the importance of selling in bringing about the boom in air conditioning, G. E. is launching the *General Electric Sales College* for its dealers. Course includes the basic principles of selling—*why people buy—how people buy—how to step up your selling power—how to hire, compensate, train and supervise salesmen—and many more valuable sales lessons.* In addition, *General Electric's '59 Sight-and-Sound Product Presentation* shows dealers the most effective way to present G-E air conditioning benefits to customers. With this combination, General Electric dealers will have the finest, most complete sales-training in the industry. And they'll be selling the products that spell CUSTOMER SATISFACTION.

Get your share of the coming boom in Air Conditioning

Take the first big step now—get complete information about General Electric's CUSTOMER SATISFACTION Program for '59. See your General Electric air conditioning distributor—or mail coupon today

Progress Is Our Most Important Product

GENERAL ELECTRIC

Air Conditioning Department, Tyler, Texas.

General Electric Company ACH1218
Air Conditioning Dept., Tyler, Texas
Attn. Mr. C. B. Ramsdell, Manager—Marketing

Please send me, without obligation, complete information on General Electric's 1959 Customer Satisfaction Program. I am interested in:

- ☐ Home heating and cooling.
- ☐ Commercial and industrial air conditioning.
- ☐ Both.

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Firm_____

Address_____

City_____ Zone___ State_____

Introduces All-Metal Walk-In Cooler

Ideal Cooler Corp., Dept. AH&RN, 2830 Magazine St., St. Louis 6, has entered the walk-in cooler market with a new all-metal, "easy-to-assemble" walk-in cooler.

"The line does away with not only some, but all structural wood," the company said. It was explained that wood, used in the construction of a cooler, will absorb moisture, thereby increasing heat conduction.

The Ideal walk-in cooler is claimed to be suitable for temperatures as low as 0° F. with 4 in. of insulation, and temperatures down to -30° F. with 6 in. of insulation. Ideal also manufactures two-temperature walk-ins with connecting doors in the partition between compartments and/or with doors on outside walls.

"No special skill is required to assemble the walk-ins," it was stated. "Assembly is done from the inside, permitting erection next to any wall or partition. Lag and metal pod fasteners are used on close centers between all sections to give tightness and precision fit."

Normal temperature walk-in coolers may also be obtained with self-contained panel packages. The condensing unit, complete with condensate pan, is installed on any 2-ft. or 4-ft. section. No drain connection is necessary.

Ideal makes not only standard walk-ins, but any special sizes, with a choice of a variety of metals and finishes. Floorless walk-ins are also available.

Bows Flanged Flexible Rubber Pipe Line

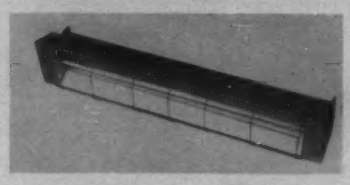
The new GRC line of type F flanged flexible rubber pipe is available in standard pipe sizes from 1 to 12 in., in standard 12-in. face-to-face lengths, according to General Rubber Corp., Dept. AH&RN, 54 Summit St., Tenafly, N. J.

Types F-150 and F-250 are designed for maximum working pressures of 150 p.s.i.g. and 250 p.s.i.g., respectively. Special heat-resisting or corrosion-resisting constructions are available for handling hot water or steam to 210° F. and for handling corrosive and abrasive materials, the company stated.

Other GRC flexible units include type S screw coupling and type G "Gen-Lok" pipe, and GRC expansion joints are also illustrated in this new bulletin.

GRC flexible pipe, properly installed, is claimed to eliminate the effects of vibration, noise, stresses, and corrosion in pipe lines.

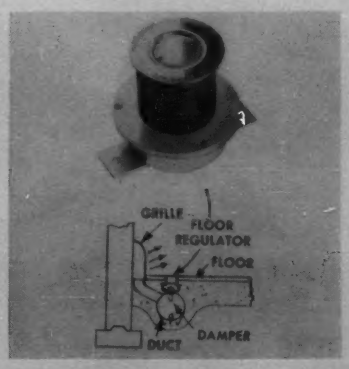
Thermal-Raye 'Heats Outdoors Economically'



"Thermal-Raye," described as "a new and economical way of heating the outdoors by directing heat so that it hits the desired spot or target," has been announced by Thermal Aire, Inc., Dept. AH&RN, 510 Cambridge St., Boston (Allston), Mass.

The device "resembles a fluorescent lighting fixture, except that it has the exclusive Thermal-Raye silica heating element that is 98% transparent to infrared," the announcement said. "Rays are aimed or directed to the spot where heat is desired by means of a semiparabolic reflector."

This system is recommended for heating outdoor theaters, swimming pools, patios, subway and bus stations, shopping centers, sidewalk bank teller windows, drive-in restaurants, loading platforms, supermarket bundle delivery sections, gas stations, etc. And it may be used indoors, too, in such places as assembly plants, warehouses, churches, and gymnasiums, the company said.



Young Offers New Damper Regulator

A new damper regulator has been introduced by Young Regulator Co., Dept. AH&RN, 20910 Miles Ave., Cleveland 28.

It is called the No. 330 Floor Line Adjustable Cover Regulator and is used for perimeter heating and air conditioning.

"The regulator is installed in the floor in a branch duct near the grille and gives accurate control of the volume of air in the branch duct," the announcement said. "In addition to making possible the use of branch ducts for perimeter heating and air conditioning, the regulator permits the use of inexpensive grilles in place of registers."

The No. 330 regulator has a brass covered plate 2⅜ in. in diameter. This can be screwed down flush with the floor after the concrete is set and the concrete form is removed.

Niagara Adds 15-Ton Power Press Brake

A 15-ton power press brake has been introduced by Niagara Machine & Tool Works, Dept. AHRN, 683 Northland Ave., Buffalo 11.

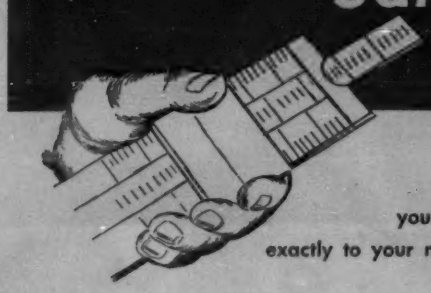
The complete Niagara line now includes 76 standard models ranging up to 900 tons.

Like all Niagara press brakes, the newcomer is capable of a variety of forming, bending, punching, blanking, and related operations, it was pointed out. All driving parts are located inboard between housings for greater operating convenience, safety, and compactness.

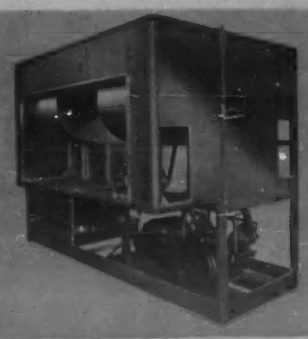
REPRINTS
SELLING FOR PROFIT.
By Frank Klein—Only $1.00 ea. Clip this ad and mail with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.

Unusual air-conditioning needs? . . .

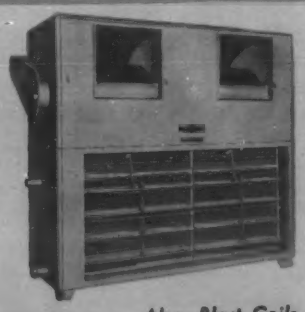
YOU CAN "DESIGN" YOUR OWN ©*Satisfabricated* PACKAGE . . . AT GOVERNAIR!



Yes, working with numerous basic models, Governair will incorporate your specifications and modifications to SATISFABRICATE the package exactly to your needs. You can be sure of its quality, too . . . for every Governair unit is constructed by expert craftsmen. This is your assurance of dependable performance and exact fit. Why not consult us on your next air conditioning project . . . from 3 to 100 ton units.



SELF-CONTAINED MULTI-ZONE AIR CONDITIONERS—with evaporative condenser. Zoned conditioner section — hot and cold deck, with mixing dampers for each zone. Sizes 7½ to 80 ton — single or dual refrigeration circuit. Ready for simple connection to duct system.



FAN AND COIL CABINETS — cooling, heating, humidifying, dehumidifying, ventilating, 1 to 100 ton, 500 to 30,000 cfm, vertical or horizontal types. Governair multi-zone fan and coil units are available in sizes ranging from 5 to 80 ton capacities, suitable for individual zoning.

Also: Blast Coils, Cooling Towers, Packaged Water Chillers, Low Temperature Coolers.

FOR FULL DETAILS WRITE

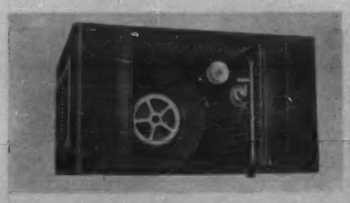
GOVERNAIR

THE GOVERNAIR CORPORATION

Originators of Completely Packaged Air Conditioners

4840 NORTH SEWELL • OKLAHOMA CITY, OKLAHOMA

FOR MORE INFORMATION ON THE PRODUCTS DESCRIBED ON THIS PAGE
Write Directly to the Company—at the Address Given in the News Item



Moncrief Blower-Coil Units Come In 2 Sizes

New "Moncrief" air handling units for summer air conditioning, which combine a vertically-mounted flat evaporator coil with the air distribution blower and motor in the same cabinet, have been announced by The Henry Furnace Co., Dept. AH&RN, Medina, Ohio.

Available in two sizes, the blower-coil units are rated at 34,000 or 55,300 B.t.u.h. net cooling capacity when operated, respectively, with 3-hp. or 5-hp. Moncrief air-cooled condensing units. These are net capacities and reflect deduction of heat generated by the blower motor, it was noted by Henry.

"When the blower-coil unit is installed with ductwork, in a summer air conditioning system, or with a forced air furnace in a year-round air conditioning system, intake and discharge ducts are attached to the unit," the company explained.

"For applications where air is taken directly from the room or discharged directly into the room, accessory intake plenums with grilles and discharge plenums with grilles are available. The discharge grilles are designed so that air can be diffused in virtually any direction."

Dunkirk Introduces Gas-Fired Boilers

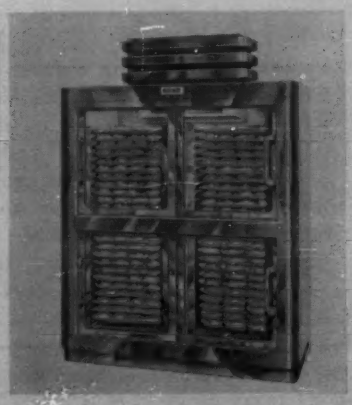
A new line of small "Wee Scot" gas-fired boilers for hot water heating systems was announced by Dunkirk Radiator Corp., Dept. AH&RN, Dunkirk, N. Y.

These boilers are made in three sizes measuring 25¾ in. high for the model 58, 29¾ in. high for model 78, and 36¾ in. high for model 98.

They are designed and rated for use with manufactured, natural, mixed, and LP gas.

A.G.A. gross output in B.t.u.h. ranges from 35,000 to 72,000 based on type of gas, with corresponding A.G.A. input from 44,000 to 90,000 B.t.u.h., the announcement pointed out.

The boilers are made in 5, 7, and 10 section sizes, factory assembled with gas burners, controls, thermaltimeter gauge, and ASME relief valve.



Koch Case Claims Maximum Accessibility

New Series MY refrigerators claimed to provide maximum accessibility and reduce the requirements for aisle space, have been introduced by Koch Refrigerators, Inc., Dept. AH&RN, 401 Funston Rd., Kansas City 15, Kan.

The unit can be integrated into a "Mix 'n Match" lineup with all other cabinets in the Series M line, the company pointed out in its announcement.

Featured are one-piece stainless steel sliding doors that are glazed with sealed, twin glass assemblies. Solid sliding doors are also available.

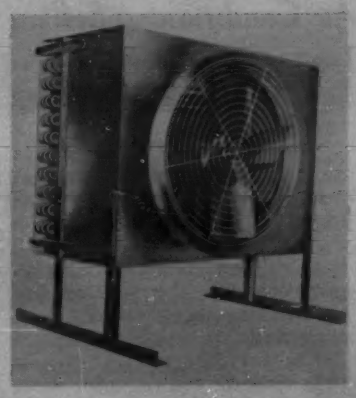
Vertical fluorescent lighting is provided between each pair of doors.

Models are available in any combination of stainless steel and white or colored porcelain, in either front opening or pass through door arrangement, and in any combination of sliding and conventional hinged doors. Refrigeration may be remote or self-contained.

Series MY sliding door refrigerators are manufactured in two, three, or four-section widths which have net capacities of 45.5, 70, and 92.6 cu. ft. respectively, according to Koch.

All sizes are available with all standard Koch Series M facility features.

Typhoon Offers New Air-Cooled Condenser Line



A new line of air-cooled condensers in 3 to 50-ton sizes that "combines high quality with competitive pricing" has been introduced by Typhoon Air Conditioning Co., Div. of Hupp Corp., Dept. AH&RN, 505 Carroll St., Brooklyn 15.

The company is also offering a "Win-trol" valve that is claimed to automatically maintain proper balance between remote air-cooled condensers and compressor at all ambients during winter operation.

The new condensers are available in eight models with air movement ranging from 2,750 to 40,000 c.f.m. The two smallest units with a nominal capacity of 3 and 3.8 tons are direct driven. The other 12 are belt driven.

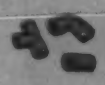
"The units feature an efficient coil design that allows high air volume at low fan speed," the company said. "Air is uniformly distributed across the coil. Coils are made of ⅝-in. o.d. seamless copper tubing and have embossed aluminum fins with die formed collars mechanically bonded to the tube."

Before delivery of condensers, coils are subjected to 300 p.s.i. tests, blown out and thoroughly dehydrated, according to the company.

When you need copper tube fittings look for the Anaconda orange and black carton

COMPLETE RANGE OF TYPES AND SIZES

Brass Fittings for Flared Tubes. In all standard combinations, nominal sizes from ⅛" through 3"


Wrought-Copper Solder-Joint Fittings. Nominal sizes ⅛" through 4"

Flanged Fittings. In sizes to meet all standard requirements

Accessories. Hangers, Flanging and Sizing Tools, Tube Straps

Cast-Brass Valves. Full range of standard sizes and combinations

Cast-Brass Solder-Joint Fittings. Nominal sizes from ⅛" through 12"

Wrought-Copper Solder-Joint Fittings for Refrigeration and Air Conditioning use. Actual OD sizes 3/16" through 4⅛"

Cast-Brass Solder-Joint Drainage Fittings. In all standard combinations from 1¼" through 8"

Designed for your convenience, the new Anaconda carton serves as a handy container on the job, in your truck or in the stock room. Contents are clearly indicated so you can quickly spot the fittings needed.

These new cartons are being placed in the hands of Anaconda distributors as quickly as possible, but whether in the new package or not, Anaconda Fittings are the best you can buy. On your next copper job, use products that you can depend on—use Anaconda Copper Tubes and Anaconda Fittings.

HAVE YOU OUR CATALOG, "Anaconda Copper Tube Fittings and Valves"? If not, write for a copy today. It lists, with illustrations and roughing-in dimensions, the complete range of Anaconda Fittings in sizes from 3/16" through 12" for all copper tube applications—general plumbing, heating, air conditioning and refrigeration. Ask for Anaconda Publication C-12. Address: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ontario, Canada.

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The Dealers Speak Up (2)

Men Who Are on the Air Conditioning Selling Firing Line Offer Some Viewpoints and Ideas on Policies, Methods, and Problems

When Editorial Director Phil Redeker recently had the opportunity of joining a group of prize-winning dealers of the General Electric Air Conditioning Div. on a trip, he recorded some of their discussions on industry problems and methods of doing business in a two-part article.

Part 1, published in the Dec. 8 issue, covered some thoughts on improving the sales and profit picture, and attitudes on the 5-year warranty. Part 2 concerns manufacturers' policies; problems in getting, training, and holding sales personnel; and a variety of ideas and methods in conducting a business which could be useful to others in the field.

Any discussion about "manufacturers' policies" coming out of a gathering of dealers and distributors handling the lines of a single manufacturer might seem unfair, but the discussions of those on the General Electric Air Conditioning Div. trip to Nassau (a majority of whom have handled the products of many different manufacturers during their merchandising careers) were actually more about manufacturers in general than any specific company.

Better Explanation of Mfrs. Moves Sought

Biggest gripe seemed to come in that area of that much overworked term — "communications," or rather, the lack of them.

"A manufacturer will do something—say like pulling a model out of the line which has been going well—which seems screwy to the dealer, but there will be no explanation for it," said one dealer. "The manufacturer probably has a good reason for everything that he does, but if he let his dealers know more about it he might find that they would be more sympathetic and helpful than he figured they'd be.

"The paperwork that develops any kind of a transaction that gets you involved with a manufacturer just about swamps a dealer," said another. "I know it's probably necessary for tax purposes and other reasons, but it seems as though it might be simplified.

"Another thing about this is that when you've got some paperwork that the factory wants, they're always in a big hurry for it, but when it's turned around the other way and you need something from them—there's no big hurry."

Some dealers seem to feel that the manufacturers — individually and collectively (in their association activity, for example) don't provide assistance for some of the problems that are encountered on the local level.

"Take the matter of working with builders, for example," said one. "I don't mean any big national program, but one of getting the builders in your own community to work with you—maybe by giving some rewards to their salesmen, and furnishing promotion items to use right at the model homes, or maybe even have sales representatives who will work on the spot with the builder.

"And maybe the manufacturers could give some sort of assistance to local organizations of dealers who are trying to work out some of their problems."

Firm Stand Behind Product Appreciated

On the positive side, what the dealer looks up to most in a manufacturer is a willingness to stand behind his product, and to be fair in the handling of problems that may come out of the use of the product. If the manufacturer exhibits these characteristics, then he is likely to be forgiven for any other activities to which the dealer might object.

What do they think about the kind of prize trip they were on—and which have become generally popular in the industry in the past few years? They wonder about them—how they got started, how they're paid for—but they all admit enjoying the trip, and look forward to them ("Whatever you do, don't make an issue of it," said one dealer, in discussing the trip).

"These trips get you to places that you never would get to on your own," was one comment.

But another dealer pointed out some practical benefits that he was getting from the trip.

"I don't know where else I could talk to so many other people who are in the same business, and get so many new ideas. I've been tempted to carry a pencil and notebook with me, but I'm afraid it would look funny. So what I do after one of these conversations in which I get some good ideas is to head up to my room and make some notes before I forget about it."

How to Improve Getting, Training of Salesmen

A continuing major problem for those who are selling air conditioning equipment at the retail level is the matter of getting (and holding) salesmen. If there are any simple solutions to the problem, they haven't been made evident to the dealers with whom we talked on this trip.

And possibly it's a subject that should be tied in with how dealers feel about manufacturers' policies, because it's an area in which some dealers feel that manufacturers — maybe individually, but more likely collectively — might do something about it.

The problem, as the dealers see it, is simply that of training a salesman to sell commercial and residential air conditioning in a particular locality. What makes it a problem is that air conditioning, for central residential and commercial applications, is still not a "shelf" item, despite all the efforts at the manufacturing level to simplify it and package it.

"To sell air conditioning it takes more than a gift of gab, a pleasant approach, and a catalog," says Joe Singer of Airko in Miami.

"To operate in any kind of an efficient manner the salesman must be able to make some sort of an estimate so that he can discuss the size and type of equipment that will be required, and possible costs. He must be able to answer questions in an intelligent manner. And he must be ready to make several callbacks because there is usually a major investment involved, and the prospect isn't going to make up his mind on the spot.

"I think it's a good question whether any distributor or dealer can do an adequate job of training salesmen," Singer continued. "That would seem to be born out by the fact that salesmen just don't stick in this business.

"We've taken on and trained a dozen or more men within the course of a year and have been lucky to come up with one fair salesman out of the whole bunch, and most of the other dealers I've talked to have had the same experience."

Is Association Effort Answer on Training?

Dealers who commented on the salesman problem expressed the thought that while most factory sponsored sales training courses were beneficial to some extent, they didn't offer a major solution to the problem because they couldn't be "tailored" to local situations.

"Would it be possible," asked one dealer, "for the manufacturers, or some organization of the manufacturers, to supply some independent sales training organization, whose efforts could be coordinated for each locality by a local association or cooperative effort of distributors and dealers?

"The distributor and dealer group could put together some material that would cover the local angles and problems, while factory sponsored training people would supply the necessary material on the information, approaches, and the other things than an air conditioning salesman must have."

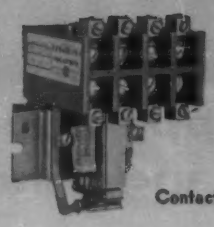
Some other dealers, granting that getting and training sales-

(Continued on next page)

FURNAS ELECTRIC CONTROLS for
EASY INSTALLATION—
BETTER OPERATION...

Magnetic Starters in 10 choices up to 100 horsepower. Furnas Starters for control of compressors offer the exclusive Furnas "in-between" size starters with dual voltage magnet coils. Constructed of the best material, these controls assure long, trouble-free operating life.

Magnetic Starters



Furnas contactors feature 20, 30, 35, 40 and 50 ampere sizes to match starter requirements. Silver cadmium oxide contacts for longer life. Floating armature insures quiet operation.

Contactors

Step or Cushion Starting permits the use of larger motors by limiting the in-rush current on starting. These methods reduce or completely eliminate objectionable line disturbances due to full voltage across-the-line starting. Furnas Electric offers a complete line of Increment, Auto Transformer and Resistance-type Step Starters.

Increment Starters

Auto Transformer Starters

Control panels for special applications such as Bulk Milk Coolers and Air Conditioning group all controls to simplify wiring and provide a single compact unit. Let us help you solve your special control panel problems.

Special Controls

Bulk Milk Cooler Control Panel

For full information on our entire line of Air Conditioning and Refrigeration Controls, write for Bulletin 5610, 1111 McKee Street, Batavia, Illinois. A45

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BATAVIA, ILLINOIS
SALES REPRESENTATIVES IN ALL PRINCIPAL CITIES

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Call, write or send blueprints now for precision shafts made to your exact specifications.

MODERN MACHINE WORKS, INC.
Manufacturers of Crankshafts, Eccentric Shafts, and Straight Shafts SINCE 1924
5354 S. KIRKWOOD AVENUE CUDAHY, WISCONSIN

Dealers Speak Up on Methods, Policies--

(Continued from preceding page)

men is a problem common to all dealers, were somewhat skeptical that dealers could get together on a matter like salesmen training without some competitive angles getting involved. It was pointed out that similar programs have been conducted in other highly competitive industries.

Can you take a man trained and experienced in service work, and make a good air conditioning salesman out of him? Those who had a comment on this were of the opinion that success in this approach would be the exception rather than the rule.

"What sometimes happens is that you ruin the guy for either type of job," declared Bernie Fow of Miami.

One approach to getting better performance out of salesmen is to "cut them in" on the profits. Some of the smaller dealers reported that instead of paying a straight commission on the sale price, they were paying a salesman up to 50% of the *profit* on a job. The theory here is that this method will insure some profit to the dealer on each job sold.

One element of dealer operations on which there seemed to be a considerable difference of opinion was the matter of service maintenance contracts. Those who favor it make these points about it:

Points For and Against Maintenance Contract

1. It provides a good base income the year-round, and helps solve the problem of keeping good service personnel.

2. A continuing contact with customers is provided, and this often leads to additional sales, either to the customer or the customer's friends.

3. Through the preventive maintenance which is provided by the continuing inspections which are part of such contracts, there is not likely to be such a backbreaking demand for service in the peak usage seasons.

Points made against selling service maintenance contracts are these:

1. If the dealer gets a run of bad breaks on some of the equipment which is under a service maintenance contract, they can be extremely costly, rather than profitable. Too much of a gamble is involved.

2. There is a good chance that service maintenance contracts can lead to more ill will than goodwill on the part of the customer, who may expect more than is actually specified in the written terms of the contract.

3. Such contracts are hard to sell, and to keep sold, and time spent on selling them might be used much more profitably in some other activity.

Majority of the dealers seemed to favor the "inspection, oil, and adjust" type of service maintenance contract, as contrasted to one which includes all labor and materials. This serves to get away from some of the big risk involved in writing such a contract, although the price charged may be considerably less, and it may also be more difficult to sell.

All agreed that it is all-important to make the inspections under any service maintenance contract, as per the established schedule. Failure to do this can lead to customer dissatisfaction, and to difficulty in selling such contracts to both old and new customers.

Service maintenance contracts have generally been considered as limited to "big city" operators, but that isn't necessarily true. George Amerson of the Sig Cox organization in Augusta, Ga., relates that this organization has steadily increased its service maintenance contract business, operating in an area which spreads as far as an 80-mile radius of Augusta.

To handle its contract service over such a fairly widespread area, the Augusta firm has built a "shop on wheels," fitting out a truck body with the necessary tools, parts, and accessories that will enable a serviceman to do practically anything that is necessary on the job site (including opening a sealed compressor). Then it has assigned one man as a specialist to handle service calls with this truck.

How Do You Price a Maintenance Contract?

Methods of pricing service maintenance contracts vary widely among dealers. One general type of formula consists of establishing a base rate for each inspection, and then using a multiplier on this base compounded of past experience and the size and type of installation involved.

There also seems to be a growing trend to service maintenance contracts on heating equipment, and Mike Tubich of Gary, Ind. says that a leading proponent of this program in his area charges $18.50 annually (without parts), and $24.50 with parts.

In any gathering of dealers and contractors there are always a number of miscellaneous ideas that come to the surface, and the following is a report on some which may be of interest to others in the field:

Some Problems Seen With Split Systems

The trend seems to be to "split-systems" as contrasted to the single central package, even in commercial and heat pump applications. Part of this, of course, is a result of the continued growing popularity of the air-cooled condenser. However, this type of application is not without its problems, declares Paul Engebretson, Conditioned Air Co., Phoenix, Ariz.:

"The 'split-system' can make many systems more complicated, rather than simplifying them," Engebretson says. "The placement of the condensing unit, the long runs of refrigerant tubing, the somewhat more complicated controls—all these make it necessary for the installer to know his business about the cooling cycle.

"Roof-mounted units in a climate like ours may go over 120° F. for much of the heaviest cooling season, and this is almost certain to result in loss of efficiency and other problems."

When installing units or ductwork in attics with temperatures in this range, Engebretson says that as a safety measure it is advisable never to permit a man to work alone in an attic. He might suffer heat prostration, and if he had any spark-producing tools with him he might cause a fire and have difficulty in getting out.

Duplicating machines are coming into wide use in all kinds of business establishments today. One "added" use which the Sig Cox organization of Augusta, Ga. has found for them is to make copies of articles pub-

(Concluded on next page)

You need only a miter box, 520 Adhesive, and a sharp knife to fabricate fitting covers fast and easily with Armaflex.

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Armstrong INSULATIONS

Air Conditioning Dealers Speak Up--

(Concluded from preceding page) lished in AIR CONDITIONING, HEATING & REFRIGERATION NEWS on servicing, installing, selling, and other subjects, for use in training programs, and for general use by the company personnel.

Most Sub-Contract Electrical Work

Most studies on the subject indicate that most air conditioning dealers subcontract the electrical work on a job. One who doesn't is Mike Moran, Bloomfield, N. J. dealer, who has his own men, and finds it easy to keep them busy on other subcontracts when he hasn't work for them.

An active service set-up on filters provides the opportunity to develop leads for future sales, and future service work, says Mike Tubich of Air Filter Sales & Service Co., Gary, Ind. This company changes and services industrial and commercial grease filter installations, and consequently hasn't found it difficult to use this service as a basis for selling equipment and getting service work on other equipment.

"You get into an establishment with some frequency and regularity, and the people get to know you or your men, and if you do the job right, you've got a good chance of getting all their future business in any kind of air conditioning, and getting recommended to their friends.

"We make a big point of having our men protect the customer's establishment in some obvious ways—like wiping off their shoes before walking into a sales floor or some other place where business is conducted, and in using dropcloths and cleaning up before leaving."

How One Dealer Keeps Servicemen

Getting and keeping good servicemen is a major problem with most dealers, and Tubich says his firm has one "gimmick" in enabling their men to get extra compensation which is based upon a somewhat special local situation — but which others might adapt.

"We have jobs spread over a fairly wide area," he points out, "and some of the servicemen live in these outlying areas. So when there are service calls in those areas which aren't of an emergency nature, we permit our servicemen to handle those calls after hours and pocket all charges. Of course, we keep general supervision on this work and check all bills."

Only Minor Changes Found In Recently Published FHA Cooling Standards

WASHINGTON, D. C.—Only minor changes appear in the section on summer air conditioning in the new Minimum Property Standards for one and two living units published recently by the Federal Housing Administration.

Comparing the new section (1004) with Mechanical Engineering Bulletin ME-13A, FHA's current guide to standards builders meet to satisfy FHA requirements for residential air conditioning, uncovers a number of rewritten sentences, but nothing added or subtracted of major consequence.

The new Minimum Property Standards are not yet in force. FHA Commissioner Norman T. Mason expects to make them effective next spring, possibly in April, after the industry has had a chance to make the transition from former requirements to the new standards.

A requirement has been added to the noise abatement subsection stating: "Remote compressors, fan coil units, or water cooling towers shall be located to avoid transmission of objectionable noise to adjacent properties."

Added to the requirement that supply outlets in bedrooms shall be provided with shutoff dampers is the phrase, "or adjustable combination shutoff and balancing dampers."

In the guarantee subsection, references to the contractor have been removed. The same guarantee and warranty are required, but the contractor is not specifically required to execute them.

The general requirement that all equipment and appurtenances shall be new has been removed.

The requirement that submitted plans show the "model number and B.t.u.h. capacity (both sensible and latent) with total KW input to the system at standard rating conditions as listed in ASRE standard 16-56 or in the applicable ARI standard" has been rewritten as follows:

"Model number and B.t.u.h. capacity of equipment or units in accordance with applicable ARI or ASRE standard."

Capacity requirement has been rewritten from:

"Capacity of equipment at local design conditions shall be not less than the calculated heat gain when outside design conditions prevail",

To:

"The capacity of equipment shall be not less than the calculated total heat gain under design indoor and outdoor conditions."

The Institute of Boiler and Radiator Manufacturers has been added to the list of authorities for heat gain calculations.

The requirement that "condensate drains shall not be directly connected to a plumbing drainage system" has been dropped.

Also removed is the requirement that "the type and thermal resistance of the insulating materials used (for ducts) shall be commensurate with the conditions of exposure and the local design temperature differences."

A final change says that "motors shall be in accordance with the Underwriters Laboratories, Inc. Standard for Air Conditioning, Commercial and Domestic Refrigeration Equipment, Subject 207A." ME-13A requires accordance with Standard for Air Conditioning Equipment, Subject 303.

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Air Distribution Requirements In Year-Round Air Conditioning

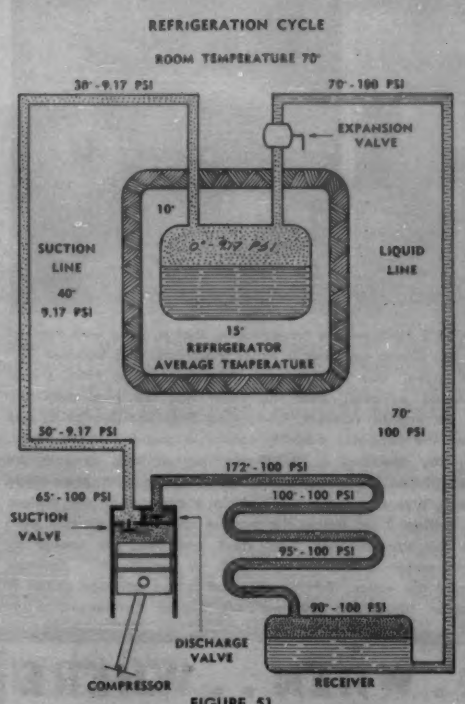

FIGURE 51

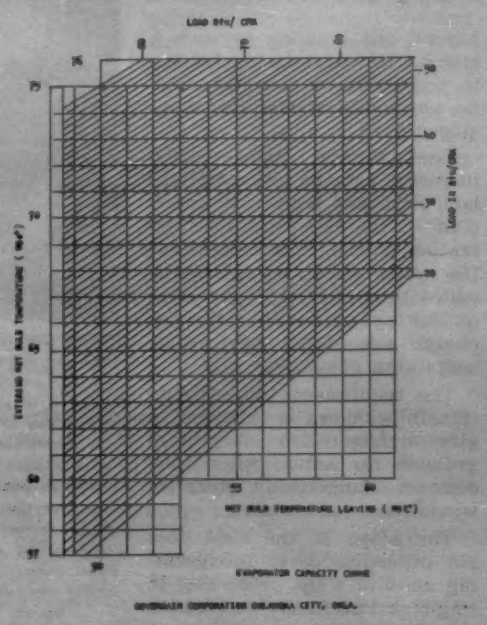

FIGURE 52

Part 3—Fundamentals of Equipment

By Frank D. Klein, Chief Engineer, Governair Corp.

2. **THE CONDENSING CYCLE** (Receiver)

(a) After removing the sensible or superheat and the refrigerant is cooled to 90° F., and the Latent heat is removed, with the refrigerant condensed to a liquid again at 90° F., it may be passed into a Receiver where it is stored for re-use.

A sub-cooling of the liquid may take place before it reaches the Expansion Valve. The 100 p.s.i. maintained in the Receiver will force the refrigerant out and into the Liquid Line, where it is metered by the expansion valve to the evaporator as fast as the heat being passed over the coil can boil the liquid into vapor.

But as the liquid passes from the receiver at 90° F. to the expansion valve it may cool to the approximate room temperature of 70° F., which is known as "sub-cooling" of the liquid. Because the heat lost is sensible only, the pressure remains at 100 p.s.i.

Refer to Fig. 51, reproduced through the courtesy of the Copeland Refrigeration Corp., for a graphic example of the foregoing explanation.

All this points to the necessity for maintaining the proper balance between the (1) Compressor, (2) Evaporator, and (3) Condenser, which of course comes about in application through selection of these three components on the basis of the job requirements.

Specific methods for this accomplishment are presented elsewhere in this text. It is sufficient that it is recognized that a balance must exist. When we investigate systems and compressor performance for volumetric efficiency this balance is assumed to exist.

Thus, the first step in the investigation of the volumetric efficiency of the compressor is to take a look at the Evaporator, to determine what is being passed on to it by the compressor, and what action is being taken on it by the air being passed over it. This latter determination is important because, regardless of what is being passed on to it by the compressor, unless the proper action is being taken by the air being passed over it, unbalance will exist and will be no fault of the compressor and its volumetric efficiency.

For most practical purposes this initial evaluation of system performance, on the basis of Total Heat Performance of the direct expansion evaporator, may be done as follows.

STEP 1: Determine the AVERAGE Wet Bulb Temperature of the air *entering* the evaporator. Do this with a wet bulb thermometer, or a multiple-lead Potentiometer, by obtaining a number of readings over the coil face area not more than 5 in. from the coil face itself, with the full amount of air induced by the blowers passing over the coil.

STEP 2: Determine the AVERAGE Wet Bulb Temperature of the air *leaving* the evaporator. Use the same method and recommendations outlined above.

STEP 3: By Pitot Tube or an Alnor Velometer properly standardized against a Pitot Tube, determine the AVERAGE quantity of air being discharged over the face of the coil, in Cubic Feet Per Minute.

STEP 4: Refer to Fig. 52, Capacity Curve, and locate the point where the ENTERING WET BULB and the LEAVING WET BULB intersect on the horizontal and vertical line. At this point read value in B.t.u. per c.f.m. on diagonal line.

STEP 5: Multiply the B.t.u. per c.f.m. read on Fig. 53 by the number of c.f.m. actually observed. Result—the Total Heat Performance of the evaporator under the observed conditions, and the assumed capacity of the compressor-evaporator-condenser balance.

(To Be Continued)

American Motors Reports Net Profit of $26,085,134 for Year Ended Sept. 30

DETROIT—American Motors Corp. reported a net profit of $26,085,134 ($4.65 a share) for the fiscal year ended Sept. 30, 1958.

Provision for taxes on income was not necessary because of prior year tax losses. The company's tax loss carry-forward on Oct. 1, 1958 amounted to $21,000,000, and at the current rate of earnings will be used up in the 1959 fiscal year.

President George Romney at the same time announced that directors have voted a 5% stock dividend, payable Jan. 5 to owners of record Dec. 5. When the amount of stock issuable would be less than one full share, payment will be made in cash at the rate of $1.625 per share outstanding.

In the previous fiscal year the company sustained a loss of $11,833,200 ($2.12 a share).

Net sales for the corporation and its consolidated subsidiaries rose 28.4% to $470,349,420 during the year, as compared with adjusted net sales of $366,391,830 in 1957, he said.

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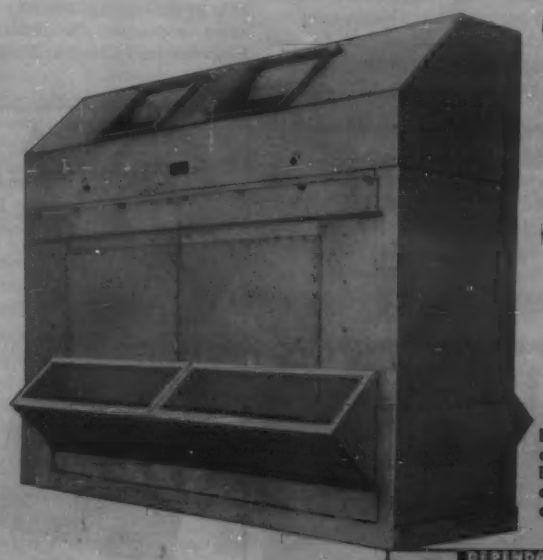

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Proposed Reciprocal Refrigeration Code for Detroit Area Includes 2 New Requirements

DETROIT—Text of two new installation requirements inserted in the model refrigeration safety code that may become the basis of reciprocal licensing between Detroit and neighboring communities are presented below.

The model code, drafted by the code committee of the recently-organized Reciprocal Refrigeration Council here, has already been presented to the city councils in Detroit and Highland Park for adoption. (See previous story on page 1, Dec. 8 issue).

Initial paper work to start the code on its way legislatively in Detroit is currently being done by the Department of Buildings and Safety Engineering, according to Frank Drogosch, chief safety engineer.

The Reciprocal Refrigeration Council expects to offer the code to the legislative bodies of other communities in the area at a later date.

The model code adopts the American Standard Safety Code for Mechanical Refrigeration, ASA-B9.1-1958 by reference. Licensing, inspection, and fee provisions follow closely that of the present Detroit code, except for minor changes.

However, two new installation requirements have been added. They are:

Valves on Water Connections

"Valves on water connections. When city water is connected to any refrigerant-containing component of a refrigerating system (e.g. shell-and-tube condensers, double pipe condensers, water-jacketed compressor cylinders, etc.) in such a way that there would be direct contact between city water and the refrigerant upon leakage through the wall separating the two fluids, the following provisions shall apply:

(a) The water control valve, either manually or automatically operated, shall be located on the inlet side of the refrigerant-containing component; and

(b) There shall be no automatically or manually operated water shut-off valve in the discharging piping from the refrigerant-containing component; except where two or more components are served in parallel from a common water supply line, provided a check valve is installed upstream from all supply connections."

Installation In Windows Or Other Wall Openings

"Installation in windows or other wall openings. Refrigerating systems or units installed in windows, transoms, or other such wall openings shall rest upon building members of sufficient strength to safely support their weight. Such units or systems shall be adequately supported by metal brackets securely anchored or attached to the building. The brackets exposed to weather shall be of suitable design, thickness, etc., to withstand corrosion for a prolonged period. Bracket attachments or anchors shall be so located as to be readily accessible for inspection, terminating within the building if necessary to meet this requirement. No refrigerating system or unit shall extend beyond the building in such a manner as to create an obstacle to pedestrian or vehicular traffic, nor shall encroach into a required yard."

Fred Stanley, refrigeration inspector for the city of Highland Park and temporary chairman of the Reciprocal Refrigeration Council, commented that the water valve provision was added to specify that valves be on the inlet rather than the discharge side of the refrigerant-containing component.

The requirement on installation in windows is intended to give refrigeration inspectors grounds for action when they discover dangerously installed window air conditioners.

The scope of the code does not otherwise cover refrigerating units of 1 hp. or smaller in single or two-family residences.

Blair Moody, Jr., secretary for the Detroit Refrigeration & Air Conditioning Contractors Association, indicated at the council meeting at which the code was adopted that refrigeration contractors would probably offer no major objection to these new provisions.

"COME ON IN, THE WATER'S FINE"—Fine for penguins that is. Our well dressed feathered friends at the San Diego zoo find a water temperature of between 50° and 60° exactly to their liking. Dee Ann Fleming, Miss San Diego 1958, shown shivering at poolside, should be cold. Both the water and the pool deck are refrigerated to penguin, not human, comfort. Consulting Engineer George C. Ray was commissioned to keep the penguins properly cooled in and out of the water. To accomplish this task, Ray specified a 30,000-gal. storage tank beneath the exhibition pool. He then placed the exhibition pool, complete with promenade deck, into the storage tank, thus creating a pool within a pool. With the bottom of the promenade deck resting 2 in. below the surface and the exhibition pool itself resting entirely in the storage tank, both deck and pool are cooled by direct contact with chilled water in the storage tank. A Heat-X "PC" Package Chiller was selected to cool the water. Refrigerant used in the package chiller is cooled by circulation through a Dunham-Bush Blower Condenser.

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Liquid Freeze Corp.—WILDERMAN REFRIGERATION CO., Seattle, has been appointed exclusive distributor and authorized service agency for "Instant-Ice" machines in northwest Washington state. PEERLESS PACIFIC CO., Portland, was named distributor for Oregon.

Koch Refrigerators, Inc.—W. B. REYNOLDS CO. of Houston and Dallas has been appointed Texas representative. The firm's area will also include southern Oklahoma.

Recold Corp.—R. E. (DICK) KENNEY, Minneapolis, has been appointed representative for air conditioning and refrigeration products in Minnesota. He was formerly sales manager for Refrigeration Engineering Co. at Montgomery, Minn.

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National Association of Home Builders Exposition
Jan. 18-22, Chicago.

Industrial Heating Equipment Association Meeting
Jan. 19-20, Cleveland.

International Heating & Air Conditioning Exposition and Annual Meeting
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Feb. 4-6, Coliseum, New York City.

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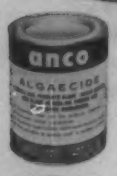

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Report on Education

Another article in a series dealing with all levels of education and training in the air conditioning and refrigeration industry.

By Frank J. Versagi, Technical Editor

9. What and How Schools Teach

Once the lecture period is over in a manufacturer's school and during the shop time in a more formal school, the technique is usually to have the students work on selected pieces of equipment in groups. A very few technical institutes and manufacturers' schools have enough equipment to allow each student to work individually. Even where this is so, such equipment is limited to compressors and small bits and pieces, not to assembled units.

American Blower is one service school attended which restricted class sizes so that each member had his own complete air conditioner to work on.

Using Job Sheets In Shop Training

Formal institutions work a lot with job sheets in the shops and labs. Job sheets are detailed instructions telling the man which wrench to use on which valve and in what direction to turn it. Step by step, these sheets take beginners through such basic operations as evacuating a system, testing thermostatic expansion valves, adding refrigerant.

Some teachers like to talk the men through the basic operations, making the students think as they go, rather than relying on job sheets.

Whether job sheets are used or not, one weakness in the group system in shop work is that the passive individual may end up getting almost no training.

Left to themselves, a given group will develop into one or two individuals handling the tools and doing the work with the rest looking on.

In one class of 20, the NEWS observed three individuals who never held a tool in a full week of training after the class was divided into four groups of five.

Alert instructors watch for this. One teacher, when working with groups, assigns a project—such as testing a sealed compressor for groups, shorts, and open windings — to the group, but insists that each individual accomplish the project himself and turn in an individual report, not a group report.

Others make sure that every individual participates by actually instructing each to do some part of the shop work. "Smith and Barnes check temperature drop across the coils; Ross, work on the blower belt; Farber and Link, check the filter."

A man can watch others perform an operation, even memorize the steps, but nothing beats using his own hands.

Another fact which part-time teachers tend to overlook is that when a man is learning something new, he will at first place paramount importance on and devote his full concentration to each detail in a process, since he does not yet know the relative importance of each facet. When a person is hearing for the first time, for instance, that a transformer is composed of a primary and secondary winding, that it has copper turns of wire, iron cores, may have insulating oil, etc.—he may concentrate on each of these to such a degree that he doesn't learn—the first time around—what a transformer *does*.

Specific Examples Should Follow Explanation

The teacher who thinks to run briefly through an entire explanation, then back up with a good specific example or two can increase student absorption greatly.

Nowhere is this difficulty more obvious than when mathematics enters the picture—not necessarily higher math, but simple arithmetic and algebra.

The NEWS covered one session in psychrometry where the class was slowed tremendously because members could not understand that—in interpolation between table values—multiplying by 0.6 is the same as multiplying by 6 and dividing by 10. In addition, the actual operation of multiplying by 6 and dividing by 10 needed explanation.

Explaining Concept Of Interpolation

Here is a case where a quick summary of the concept of interpolation and its function would have helped, for talking with the students later, we determined that some were already stymied by not knowing what interpolation was *before* they were additionally stymied by the arithmetic itself. Had the instructor worked a typical problem first—even rapidly—these students would have known where each step fitted into the picture.

Total time would have been less.

One teacher who understands this principle uses it very well in teaching the "step chart" showing the relationship between latent and sensible heat when ice is melted, water heated, then boiled. Where other instructors begin by showing that as ice increases in temperature from below freezing to freezing, sensible heat is involved. They go through the melting of ice, then up through the rise in temperature of the water to boiling, etc.

The instructor of whom we are speaking, however, draws the entire chart on the board, tells, in only a couple minutes, what it shows, then begins the detailed explanation. The NEWS has seen the step chart used many times in teaching the concepts of latent and sensible heat, and student retention of the information is always greatest when such a quick preview has been given.

In teaching advanced service, manufacturers' schools have the advantage of being able to assume a minimum background on the part of their students, although we have seen that such an assumption may not always be correct.

Thus, they can—in these advanced schools—get right to troubleshooting in the shop without having to work with basic operations. The usual procedure is for instructors to build troubles into a unit while students are out of the room. Then the students return and attempt to locate the trouble.

While some of the built-in troubles are too pat and easily discerned, many are quite realistic—with defective relays, capacitors, dirty filters, and the like being placed in units requiring students to do full instrument testing for accurate diagnosis.

There is a pronounced inconsistency in the quality and quantity of equipment possessed and used by schools of the same general level. This variability occurs in private and public schools, in trade and manufacturers' courses.

One shop, for example may have a couple dozen compressors of various types for students to work on; another may have two or three. One school may have a good assortment of modern reach-ins and other commercial cases; another will have one or two very old boxes. This manufacturer's classroom may contain 10 package air conditioners, a demonstration refrigeration cycle board, mock-up panel boards showing controls and wiring circuits; the next manufacturer may have two condensing units, and a handful of cutaway valves.

In manufacturers' schools, of course, the difference is due primarily to the varying attitudes of management toward training schools. We discussed this point earlier.

Industry, too, is responsible for the general lack of new and extensive equipment at schools of all levels about the country, if we are to believe a great many educators who made this point. Further discussion of the relationship between industry and education in the cooling field will come a little later.

In evaluating a school, however, it is unwise to place undue emphasis on the equipment present—at least on the *newness* of such equipment. By far more important is the caliber of the instructors, and the reputation of the school.

In discussing related training with one executive of a technical institute, the NEWS mentioned a fairly well known trade level public school which has earned a reputation for turning out a steady supply of competent servicemen. The institute executive pointed out that the school had "extremely poorly equipped shops." (The particular technical institute is one of the few which is extremely *well* equipped.)

He admitted, however, that the caliber of instruction at the trade school was such that it overcame the weakness in equipment.

Incidentally, many instructors like to use sulfur dioxide in classes, even on newer training equipment because it keeps students on their toes and helps them develop good working habits relative to handling refrigerants, soldering and tightening joints, and pumping down or evacuating systems.

All in all, the greatest tangible need of cooling schools at all levels is for more equipment, newer equipment.

(To Be Continued)

2,430 FROZEN FOOD PACKS

and two-side shopping in Warren's new Twin-Isle*!

Maximum capacity in minimum floor space was the problem presented to Warren by retailers everywhere, and 76 years of experience and research paid off again—with the space-saving, big-capacity Twin-Isle Merchandiser.

The Twin-Isle offers two-side shopping from two compartments —yet one refrigerator—holds 2,430 frozen-food packs or 2,160 pints of ice cream, and is only 58" wide over-all. Offers twice the variety of a conventional low-temperature display case!

Lower total investment in cases themselves, less comparable horsepower per lineal foot, *installation costs cut in half*, and a drastic reduction in cost of operation. Another fine example of product result from Warren's CONTINUOUS RESEARCH Program.

- COLORAMICS® Bands optional at no extra cost.
- Four-shelf merchandising canopies available.

*Patent Pending

this much floor space SAVED!

Warren Refrigerators BOX 1436 • ATLANTA 1, GEORGIA

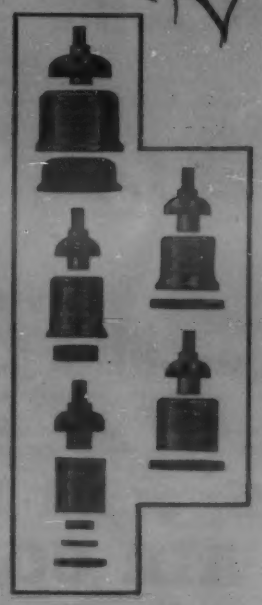
EXPORT DIVISION: P. O. BOX 27084, LOS ANGELES, CAL.

JUST 3 MINUTES

of a serviceman's time to seal hermetic terminal leaks on the job in most refrigeration and air conditioning units, with . . .

WATSCO TERMINAL SEALS

Terminal leaks on sealed units are stopped instantly and permanently with WATSCO Terminal Seals. All work is done from the outside of the dome, and no special tools are required. Do it right on the job. . . . . WATSCO Terminal Seals are packed three to a set and are complete with all washers, gaskets, and instructions.



U.S. Pat. No. 2,451,701

"ANNOUNCEMENT TO THE TRADE"
Please take notice that infringers of Patent No. 2,451,701, covering our terminal replacement for sealed refrigeration units, will be prosecuted to the fullest extent permitted by law. This announcement is addressed not only to manufacturers of infringing terminal replacements, but also to those who sell, distribute or use them. (Signed) WATSCO, INC.

Packed with every Terminal Seal kit . . . a special locking nut, complete with instructions, to facilitate removing corroded and tight nuts . . . without twisting or damaging the terminal post.

Send for 1958 Catalog — Write Dept. H-12

WATSCO INC.
1020 EAST 15th STREET, HIALEAH, FLORIDA

Take a preview peek at something SPECIAL

SPECIAL

SPECIAL CIRCULATION AT THE SHOW

When the crowds converge on Philadelphia for the 14th International Heating & Air Conditioning Exposition, Jan. 26-29, 1959 the big, special Show Issue of the NEWS will be right there with them!

SPECIAL

SPECIAL ATTENTION FOR YOUR EXHIBITS

You can *help guarantee* lively attendance at your Booth by letting the visitors know where you are located—everything interesting you will have on display. They will *see* your story in THE BIG ISSUE!

SPECIAL

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Exhibiting Firms, Exhibit Locations, New Product Information, Editorial Details of Important Subjects, Full Coverage of all Events—all the news, all the excitement in THE BIG ISSUE!

SPECIAL

SPECIAL INTEREST FOR THOSE AT HOME

Nearly everybody in the Heating and Air Conditioning industry will be watching for this issue—because whether one is able to attend or not, one won't want to miss a single bit of news.

SPECIAL

SPECIAL SELLING OPPORTUNITY

In this atmosphere of thoughtful readership, your product or service message will make a maximum selling impression—will help get 1959 sales off to a strong start.

SPECIAL

EVERYTHING SPECIAL BUT THE RATES

Take advantage of this outstanding selling opportunity at the same rates which apply to every issue of the NEWS.

ISSUED: January 26, 1959

LAST FORMS CLOSE: January 14, 1959

Special Issue for the INTERNATIONAL HEATING and AIR CONDITIONING EXPOSITION, January 26, 1959

AIR CONDITIONING
HEATING & REFRIGERATION
NEWS

The Newspaper of the Industry

RESIDENTIAL — COMMERCIAL — INDUSTRIAL

The leading air conditioning publication with highest paid circulation in the field.

450 WEST FORT STREET
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NEW YORK, 521 FIFTH AVE.,
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DETROIT, 450 W. FORT ST.,
WOODWARD 2-0924, AL SCHILDHAMMER.

ASHAE-ASRE Merger--

(Concluded from Page 1, Col. 5)

sult of the favorable vote of the ASRE on the merger to those attending the New Orleans convention, indicated that it would take from six weeks to two months for final approval to be received, and by that time some of the major steps necessary to effect the consolidation will have been taken, with only the official sanction needed to set the wheels in motion.

Two of the moves that will demand much of the attention of those making the merger effective will be that of consolidating the national offices, and charting the course of the new society's technical journal.

However, some of the questions that will be of interest to the rank and file of the membership have been answered to the following extent:

Individual members of ASHAE and ASRE automatically become members of ASHRAE, holding the highest grade of membership which they have attained in either organization.

Local ASHAE chapters and ASRE sections can continue with their planned local meeting programs on a separate basis through to May, 1959. However, they are expected to go ahead with plans for consolidating into a single local organization and if a local agreement is reached, this could take place when consolidation becomes legally official.

The merger plan proposed five different methods of consolidating the local groups, which such groups select at their option. Local chapters are to have the privilege of organizing divisions according to technical interest in those cases where the local groups desire flexibility in the planning of their programs.

Chapters are to be supported financially by the national society with supplementary local dues at the option of the chapters, with the approval of the board of directors. The plan does not contemplate any change in the status of the reserve funds of present ASHAE chapters or ASRE sections. The disposition of existing reserve funds would be at the discretion of the local groups.

The scheduled meetings of the national societies next summer —ASHAE June 7-11 at Vancouver, B. C. and ASRE June 22-24 at Lake Placid, N. Y.— will take place as scheduled, unless there is some change in the present planning.

Once the merger becomes official, a new slate of officers will take office. According to the agreement for consolidation, the slate of officers for next three half-year periods will be:

January 1959 to June 1959
President—Cecil Boling
1st Vice President—Arthur J. Hess
2nd Vice President—Daniel D. Wile
3rd Vice President—Walter A. Grant
4th Vice President—Robert H. Tull
5th Vice President—ASHAE
1st Treasurer—ASHAE
2nd Treasurer—Franklyn Y. Carter

June 1959 to January 1960
President—Arthur J. Hess
1st Vice President—Daniel D. Wile
2nd Vice President—Walter A. Grant
3rd Vice President—Robert H. Tull
4th Vice President—ASHAE
1st Treasurer—Franklyn Y. Carter
2nd Treasurer—ASHAE

January 1960 to June 1960
President—Daniel D. Wile
1st Vice President—Walter A. Grant
2nd Vice President—Robert H. Tull
3rd Vice President—ASHAE

If there was any great bitterness over the result of the ASRE vote on the merger, there was little manifestation of it at the New Orleans meeting. Some of the leaders of the opposition expressed some opinion that "there was a possibility" of the formation of some independent organization, but there was no evidence of any definite planning in this direction.

Lewin-Mathes Names Schweich Exec. V.P.

ST. LOUIS — Edward F. Schweich has been named executive vice president of Lewin-Mathes Co., Div. of Cerro de Pasco Corp., it was announced by Richard H. Lewin, Lewin - Mathes president.

Schweich

Schweich formerly served as secretary of the company, which is a copper refiner and producer of copper and brass tube, pipe, and rod, with headquarters in St. Louis and plant facilities at Monsanto, Ill.

Other appointments announced by Lewin include those of Bram J. Lewin as vice president in charge of production, Harold E. Lewin as vice president in charge of metal purchasing, and Rodrick J. Lewin as vice president in charge of sales.

James M. Dreyer has been named secretary, Jerome J. Marx has been designated general sales manager, and Henry Stucke has been named assistant general sales manager.

Albert K. Brown Dies

PHILADELPHIA—Albert K. Brown, 63, a pioneer in air conditioning for multiple story buildings, died recently in St. Luke's hospital, Bethlehem, after being stricken at a football game.

Inspector--

(Concluded from Page 1, Col. 4)

These developments followed special hearings before San Francisco's civil service commission, and its staff.

One morning's hearing included presentations by Anthony P. Meley, executive secretary of the Sheet Metal Contractors Association of San Francisco. This association includes classification C-20 specialty contractors in warm air heating, ventilating, and air conditioning.

Tom Roberts, business agent for Sheet Metal Local 104, was present.

Present for Refrigeration & Air Conditioning Contractors Association of Northern California was George Eskra, executive vice president of Ray Winther Co. and chairman of the RACCANC building code committee, and M. M. Smith, secretary of RACCANC.

George Kyne and Frank McDermott of UA Local 38 pointed out the refrigeration part of air handling belongs to the refrigeration contractor and the refrigeration journeyman.

The civil service commission staff was well represented by trained classification experts.

An afternoon meeting was for the purpose of bringing in additional experts in the air handling field.

As a consulting mechanical and electrical engineering expert, Joe Murray of Buonnacorsi & Murray, cleared up many points. His firm is prominent in the field of air conditioning design and has designed many large buildings in California.

An experienced contractor and Carrier distributor, John F. Ward of Edward B. Ward Co., gave testimony.

After the hearings, the commission announced it was recommending two inspection classifications—"warm air heating and ventilating inspector" and "refrigeration inspector."

Because the air conditioning installation often involves use of two crafts, and in the interest of greater flexibility for operations of the Bureau of Building Inspection, it was agreed the refrigeration inspectors and the warm air heating and ventilating inspectors could both make inspection of air conditioning installations.

It was believed that of the eight inspectors originally contemplated with refrigeration journeyman training, there would now be four positions provided for inspectors requiring refrigeration journeyman qualifications, and four positions requiring experienced sheet metal journeymen who have advanced training and experience in air handling.

At its regular meeting, the Civil Service Commission had the new specifications for the jobs read aloud.

Meley was present and said the specifications are satisfactory to the industry. James Wurm of the commission staff said the new specifications are satisfactory to Bush.

The commission formally accepted and adopted the report setting up the revised new classification of "refrigeration inspector" and the new classification of "heating and ventilating inspector."

New 1-hp. portable.

Carrier Line--

(Concluded from Page 1, Col. 3)

John Voigt, room air conditioner sales manager, said Carrier's approach to the portable this year is to emphasize its "carry home" and "do-it-yourself" installation features.

Carrier distributors were also shown a new heat pump model with a depth of 19 in. It has thermostatic control and can switch automatically from heating to cooling.

The standard air conditioners range from 1 to 2-hp. capacity in 19 and 31-in. deep cabinets.

Starline series feature "Variflow" grilles to regulate direction of air circulation plus a ventilation control for quick freshening of a room.

Crestline series has a new four-way adjustable air deflection grille and a two-speed fan.

At the meetings in Atlanta, Houston, Chicago, and New York City, Voigt outlined an early season stocking incentive program for dealers and explained a traffic building contest.

O Say Can You See Portable Under Tree?

SYRACUSE, N. Y.—Air conditioning at Christmas?

That's the idea behind a promotion launched by Carrier Corp. this month to boost the sales of its portable air conditioners during the Yuletide season. Carrier is using a Christmas shopping theme to demonstrate how simply the units can be taken home and installed or "put under the tree."

The company points out that those receiving gift portables won't have to wait till the heat of summer to get some use from the 60-lb. units. Besides cooling, they also serve as a heat pump and a dehumidifier.

Carrier dealers across the country are being provided with the holiday air conditioning promotion package.

Gibson Starts Early On Cooler Production

GREENVILLE, Mich. — Gibson Refrigerator Co. has started air conditioner production a month early, it was reported recently. Refrigerator production schedules have been increased twice in a month. Workers have been recalled and a 10-hour shift has been instituted.

Ranney Refrigerator Co. has been on 10-hour days since Dec. 1, the report said.

For Your Reprint Copy
"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.
Only 25¢ each.

Carrier Buys Piece Of ABC Credit Firm

NEW YORK CITY—A transaction is in progress that will soon make the floor plan and financing services of the Appliance Buyers Credit Corp. available to Carrier Corp. distributors and dealers, it was reported here recently.

Robert Finch, president of ABC, with headquarters in St. Joseph, Mich., said that a preliminary agreement has been reached by which Carrier will purchase a 20% interest in the firm.

Only legal agreements remain to be completed.

Purchase price was estimated at $2 million.

ABC is a subsidiary of Whirlpool Corp. It was formed to handle dealer floor plan and instalment sales.

DETECT TROUBLE FAST!

IN ANY AIR CONDITIONING AND REFRIGERATION LIQUID LINE

It's easy to detect trouble quickly in refrigeration lines with this indicator. Letter "K" is etched on pyrex heat-resisting tube which shows through sturdy brass body at sight port. When "K" is not magnified, it indicates a shortage of refrigerant or a clogged line. Available in male and female flare sizes. Maximum operating pressure —500 p.s.i. and maximum temperature 200° F. Easy to install.

See your Kerotest wholesaler! Ask for Model No. R81C.

KEROTEST

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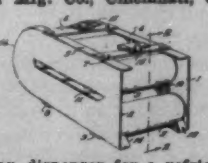
MIGHTY MITE
THERMAL PROTECTORS
UL
FOR MOTOR OVERLOAD PROTECTION
MECHANICAL INDUSTRIES PRODUCTION COMPANY
223 ASH STREET • AKRON, OHIO

PATENTS

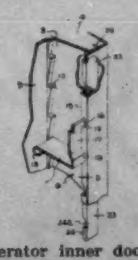
Week of Sept. 16 (Concluded)

2,852,227. CAN DISPENSER FOR REFRIGERATOR. Thomas H. Mason, Cincinnati, Ohio, assignor to The Brunhoff Mfg. Co., Cincinnati, Ohio.



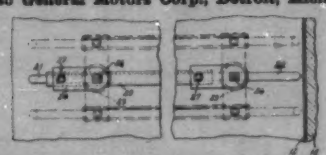
2. A can dispenser for a refrigerator consisting essentially of a pair of opposed side wall units having integrally formed inturned flanges extending along the top, rear and bottom edges thereof, and side rails extending inwardly from the said side wall units intermediate the upper and lower edges thereof. . . .

2,852,328. REFRIGERATOR DOOR INNER LINER. William R. Jewell, Lyndon, and John W. Pulaski, Louisville, Ky., assignors to General Electric Co.



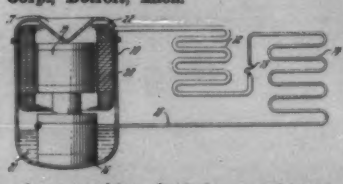
A refrigerator inner door liner having upstanding side walls defining a recess including a plurality of shoulders formed on the rear face thereof for supporting the rear edge of a shelf at a plurality of positions within the recess, a shelf front edge supporting means comprising a continuous ledge extending from each of said side walls adjacent the front thereof and overhanging said recess. . . .

2,852,329. ADJUSTABLE REFRIGERATOR SHELF. Robert F. Smith, Grosse Pointe Woods, Mich., assignor to General Motors Corp., Detroit, Mich.



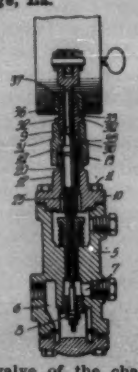
2. In combination, a cabinet having walls defining a compartment therein provided with a front access opening, a door normally closing the compartment access opening, means for supporting a shelf within said compartment, said means comprising a pair of spaced apart stationary members on each side wall of said compartment, front and rear bracket members within said compartment associated with said stationary members. . . .

2,852,470. REFRIGERATION COMPOSITION. Albert L. Henne, Columbus, and Victor A. Williamitis, Dayton, Ohio, assignors to General Motors Corp., Detroit, Mich.



As a working fluid for a refrigeration apparatus of the seal compressor of the compression type, a refrigerant which is a fluorochloro derivative of a class of aliphatic compounds selected from the group consisting of methane and ethane capable of being in the liquid and gaseous phases within the operating temperatures of said refrigerating apparatus. . . .

2,852,982. VALVE. Paulsen Spence, Baton Rouge, La.



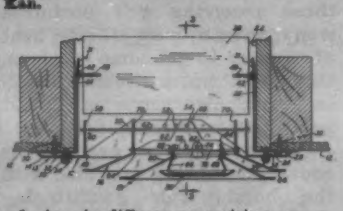
1. In a valve of the character indicated, a valve body, a valve member having a valve stem projecting from said valve body, a bellows type seal in a part of said body, said bellows type seal comprising a sleeve member having a closed bellows hermetically sealed to the bottom thereof, said sleeve at the top having a tight fit with a seat on said body. . . .

Week of Sept. 23

2,852,998. SYSTEM FOR DIFFUSION OF AIR IN SHOW HALLS FOR VENTILATION AND AIR CONDITIONING PURPOSES. Jose Llobet Serra, Barcelona, Spain.

A floor-supported seat provided for diffusing air received from an air source comprising a back rest, arms extending forwardly of said back rest in substantially horizontal direction, a seat coupled to the back rest and normally extending forwardly thereof at a level lower than that of the arms, hollow side walls beneath said arms and on both sides of the seat and having air diffuser outlets at their respective fronts and sides. . . .

2,852,999. AIR DIFFUSER. Ralph S. Lowensohn, Wichita, Kan., assignor to The O. A. Sutton Corp., Inc., Wichita, Kan.



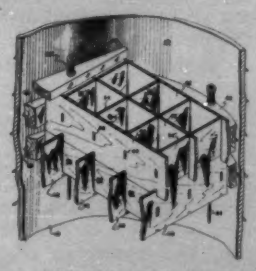
1. An air diffuser comprising an annular body member adapted to be secured to the end of an air duct and having a central opening therein, a diffuser ring positioned in said opening having slanting side walls for distributing air discharge through said central opening outwardly and laterally of said central opening in a plurality of directions, and means for supporting said diffuser ring from said body member. . . .

2,853,147. ACOUSTIC FILTERS FOR AIR DUCTS. Dominic D'Eustachio, Port Allegany, Pa., assignor to Pittsburgh Corning Corp., Pittsburgh, Pa.

1. An acoustic filter for an air duct, comprising a body having a sinuous passage extending through it, at least the major part of the walls of said passage being made of open-celled cellular glass and having, in addition to the cells of the cellular glass, resonant cavities formed therein opening into said passage, said resonant cavities extending into said body of cellular glass for a substantial distance and terminating therein.

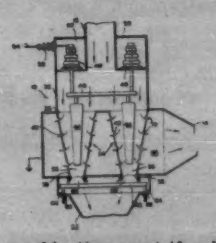
Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

2,853,150. COLLECTING ELECTRODE STRUCTURE. Joseph W. Lenehan, New Brunswick, N. J., assignor to Research Corp., New York, N. Y.



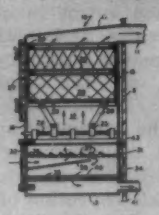
1. A collecting electrode assembly comprising a plurality of superposed layers; each of said superposed layers comprises two sets of vertically offset wooden members, with the members of one set extending at right angles to the members of the other set in its respective layer, the members of at least one set being slotted to interlock with the members of the other set. . . .

2,853,151. ELECTRIFIED CENTRIFUGAL DUST SEPARATING DEVICE. John Guldemond, Bound Brook, N. J. assignor to Research Corp., New York, N. Y.



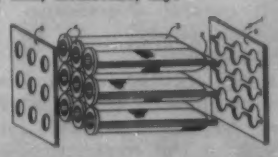
1. A combination centrifugal and electrostatic dust separating apparatus comprising a separator duct having a dirty gas inlet and a concentrated particle material outlet tapering inwardly from the inlet to the outlet, the wall of the duct having a plurality of parallel peripherally extending louvered slots, the louvers thereof sloping inwardly of the duct toward the outlet at an angle of from about 35° to about 45° to the duct wall. . . .

2,853,153. MILITARY VEHICLE AIR FILTER. Robert W. Sexton, Louisville, Ky., assignor to American Air Filter Co., Inc., Louisville, Ky.



1. An air filter apparatus for military tanks and the like, comprising: a housing having a clean air outlet zone, an air cleaning zone and an air inlet zone, the latter including a drawer-receiving pocket having a first air inlet in the form of an open mouth at one end to receive air from one source, a second air inlet in the form of an open mouth at its other end to receive air from a second source and an air outlet opening intermediate its mouths to discharge air into said air cleaning zone. . . .

2,853,154. POCKET-TYPE AIR FILTERS. Richard D. Rivers, Louisville, Ky., assignor to American Air Filter Co., Inc., Louisville, Ky.



1. An air filtering unit of the disposable pocket-type comprising: a first plate member having an inner face, an outer face and a plurality of air passage apertures therethrough; a second plate member having an inner face, an outer face, and a plurality of filter pocket receiving apertures therein, said first and second plate members being arranged with their inner faces opposing each other. . . .

(To Be Continued)

Coleman Executive, Heads of 3 Heating Firms Tell Senate Rackets Committee Of Alleged Payoffs for 'Labor Peace'

WASHINGTON, D. C. — Details of alleged payoffs to a vice president of the Sheet Metal Workers Union and one of his aides were given to the Senate rackets committee recently by a Coleman Co. executive and heads of three Illinois heating firms.

The union officer, Arthur H. Cronin, who is also head of the union's Chicago Local 73, denied their stories. His aide pleaded the Fifth Amendment when asked about a purported fund for needy retired union members.

McClellan Hints at Perjury Charges

Declaring that someone obviously was lying, Committee Chairman John L. McClellan said he would turn the testimony over to the Justice Dept. for possible prosecution for perjury.

The hearing focused on what Sen. McClellan termed "labor peace put on the market as a commodity for sale." This, he asserted, is "one of the most insidious of union practices."

Carl L. Burrows of Coleman Co. told the Senate investigators that he and another official gave Cronin a total of $27,000 in cash to solve the firm's labor problems.

He said they paid that amount in six instalments between 1952 and 1954 so union members would agree to handle the company's equipment. The payoff arrangement, Burrows testified, had been made by his sales manager, the late Louis Marks, who said labor peace "would require a little cash."

Burrows said he had handed $2,000 to Cronin outside a Chicago bank, and was present when two other payments of $5,000 each were made—one in the La Salle hotel, Chicago, and the other in a cocktail lounge. Also, he said, Marks was given three other payments of $5,000 each to deliver to Cronin.

Envelope Changed Hands In Dark Cocktail Lounge

But Cronin swore that the only money he had received was handed to him in the cocktail lounge in 1954. He said it was too dark there to see what was in the envelope, so he didn't discover until he opened it at home that it contained $5,000. He claimed he returned the money. He said he never told his union superiors about the $5,000.

Cronin told the committee he had never given the Coleman Co. special help.

Burrows stated that the union had been refusing to install Coleman heating and air conditioning equipment because it was made by another union.

The committee also heard testimony from Warren Tapper, head of Tapper Central Heating Co., Des Plaines, Ill.; Harold Erck, president of Airway Heating & Ventilation System, Inc., Chicago; and Bert Galiger, head of Galiger Heating Co., Libertyville, Ill.

Tapper and Erck told the investigators that Cronin asked them to pay into the fund for needy retired metal workers. They said his request that the money be paid in cash made them suspicious.

Tapper said he was asked for $500 and gave $250 in 1949. "As far as I know," he testified, "no one can open a sheet metal shop in Chicago without paying off."

Tapper testified that he also was advised to buy sheet metal products from Acme Furnace Fitting Co. owned by Cronin.

However, Cronin denied taking money from him or any other employer. He denied, too, that he or union business agents had tried to direct business to the Acme firm. He said he had sold his interest in Acme three or four years ago.

Erck told the senators he paid $300 in 1950. Asked if he had not thought of this as a payoff, he answered: "I took it that way, yes."

Galiger said he had given $400 to Martin J. Howard, one of Cronin's aides, in 1956, after having heard rumors that the fund to which he was contributing was a form of payoff to union leaders.

Howard Pleads Fifth

Called to the stand, Howard pleaded the Fifth Amendment, saying it might tend to incriminate him if he answered questions as to whether a fund for the needy existed, whether he collected $400, and whether he kept any money himself.

At another session, business agent Ray Caldwell was accused by two other heating contractors of accepting pay-offs so that they would be "allowed" to do business.

'Had To Pay If I Wanted To Be Contractor'

Wallace J. Lis Chette, of Acme Heating Co., Wheeling, Ill., testified that he paid Caldwell $400 "because I had to do it if I was going to do any new construction work, and I had to do new construction to make a living.

"I wanted to be a heating contractor and that is the only way to do it in Illinois."

Caldwell admitted that Lis Chette once left $200 in cash for him at union headquarters. But he said he returned it.

Emmett D. Wells of Des Plaines, Ill. testified that he has had to pay a total of $750 to Caldwell since 1952. He testified he and his partner each paid $150 to Caldwell when they went into business together. He paid $200 when he bought his partner out and continued the business alone, Wells said. Later he sold this business and started another in 1955. He had to pay $400 to operate that one, he said.

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Servicing Automobile Air Conditioners

(Vol. 3)

BY C. DALE MERICLE

AIRTEMP

Airtemp Div.
Chrysler Corp.
Dayton 1, Ohio

Two lines of under-dash type air conditioners were offered by Airtemp in 1958 for installation on various makes of cars. These were the "Airtemp" model 2931-3 and the "MoPar" model C.

These units should not be confused with the built-in type systems offered by the automotive divisions of Chrysler Corp.

The 1958 Airtemp and MoPar air conditioners are virtually identical with each other and neither represents any significant changes involving service procedures over the late 1957 Airtemp unit.

An Airtemp V-type compressor is driven through a magnetic clutch which is cycled to control temperature and prevent coil icing by an adjustable thermostat mounted on the evaporator case.

The 1958 Airtemp unit employs a two-speed fan controlled by a toggle switch, while the 1958 MoPar unit has a three-speed fan controlled by a rotary switch.

Plastic outlet grilles on the face of the evaporator case are different for the 1958 Airtemp and MoPar units, but the serviceman will have no difficulty in distinguishing the two lines because the name is prominently displayed along the top of the evaporator case.

Full charge of both 1958 units is approximately 2¼ lbs. of Refrigerant-12.

CADILLAC

Cadillac Motor Car Co.
General Motors Corp.
Detroit 32, Mich.

Except for some relatively minor modifications, the 1958 Cadillac air conditioner is the same as the 1957 model, and the service instructions on the 1957 model will apply equally well to the 1958 model.

The radiator and condenser have been moved forward to provide room for a new, full fan shroud and to increase air conditioner capacity and engine cooling. Condenser is the same basic design as 1957 but has larger capacity.

A larger compressor (Frigidaire) is employed on the 1958 units. This compressor is of welded head design, so there can be no service in the field on the internal parts of the compressor. The clutch assembly, clutch coil and coil housing, and the oil seal may still be serviced, however.

The sight glass has been removed from the liquid line and is part of the dehydrator-receiver assembly in 1958 models.

Hot gas by-pass valve is the same as used in 1957. It is located slightly higher on 1958 models. The high-pressure line tee fitting has been moved from the compressor to the by-pass valve.

CHRYSLER

Chrysler Div.
Chrysler Corp.
Detroit 31, Mich.

Air conditioning systems offered by Chrysler Corp. in 1958 for its Imperial, Chrysler, DeSoto, Dodge, and Plymouth automobiles are essentially the same as used in 1957, at least as far as service requirements are involved.

Some components were relocated or modified slightly in 1958 models, but the basic circuit and function of components remain unchanged from the 1957 system.

An Airtemp V-type compressor is driven through a magnetic clutch. Besides being controlled by an on-off switch, the magnetic clutch is cycled by a thermostat to prevent icing of the evaporator.

Temperature control is achieved by regulating the amount of hot water delivered to the heater core, which is located in the air circuit after the evaporator, as in the 1957 system.

Expansion valve and thermostatic switch which cycles the clutch to prevent icing are located outside the evaporator-heater housing in 1958 models. Capacity of the blower used on 1958 systems has been increased about 15%. Sight glass is mounted in top of combination receiver-drier beside condenser.

With the above minor exceptions, all the service data previously given on 1957 Chrysler Corp. cars will likewise apply to 1958 models.

POLAR-TEMP

Air Controls Corp.
400 Stonestreet Ave.
Rockville, Md.

The 1958 "Polar-Temp" automobile air conditioner, produced by Air Controls Corp., represents no major changes in the refrigerant circuit over 1957 models that will affect service.

Deluxe model continues with use of an adjustable thermostat cycling a magnetic clutch to control temperature.

Pushbutton blower controls, however, were introduced on the 1958 unit.

Both temperature and blower controls are mounted on the face of the evaporator case, which is attached beneath the dash.

Some 1958 Deluxe Polar-Temp units will be found equipped with centrifugal blowers instead of propeller-type fans, which are standard. A conversion kit has been developed by the manufacturer to facilitate changing to centrifugal blowers.

Refrigerant charge in the 1958 Polar-Temp unit is 2 lbs. of Refrigerant-12.

FIG. 1—"Monitor" under-dash unit introduced in 1958 by Mark IV.

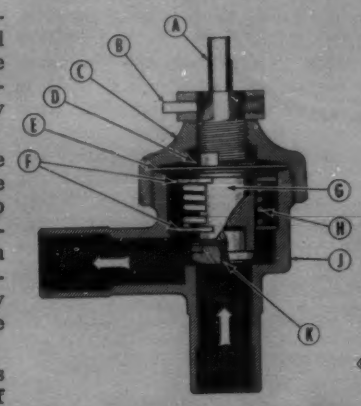

FIG. 3—Cutaway of SelecTrol temperature control valve. A—adjusting shaft; B—stop pin; C—bonnet; D—cup; E—diaphragm gasket; F—washers; G—valve; H—spring; J—valve body; K—by-pass hole.

* * *

MARK IV

Mark IV Div.
John E. Mitchell Co.
3800 Commerce St.
Dallas, Texas

Mark IV's 1958 air conditioner line included two under-dash models — the "Monitor" and "Standard"—plus a trunk model.

The Monitor (Fig. 1) is new for 1958, the other two models being basically the same as produced in 1957.

Chief differences between 1958 and 1957 models as they affect service are as follows:

Compressor: The Tecumseh HH or York A-209 is found on 1958 models.

Magnetic clutch, which was optional on both 1957 models, is standard on the 1958 Monitor and trunk units but optional on the 1958 Standard under-dash unit.

Condenser: Still located in front of radiator.

Evaporator: No major changes are incorporated in the 1958 Standard and trunk units. New Monitor model has two squirrel cage blowers instead of single propeller fan used on Standard unit, and includes "SelecTrol" temperature control unit.

Controls: Standard and trunk models in 1958 continue with "RoboTrol" capacity control valve, a spring-loaded modulating valve in the suction line.

A rheostat blower control is used on 1958 Monitor and Standard models, but 1958 trunk model continues use of two two-speed controls, one for each blower.

Variable capacity control is achieved on 1958 Monitor with SelecTrol, which is a manually operated throttling valve located in suction line between end of evaporator and bulb of thermostatic expansion valve (Fig. 2). Its setting can be changed by rotating a knob on the right of the evaporator housing.

By opening and closing the SelecTrol (Fig. 3) the amount of suction gas that can act on the thermo bulb of the expansion valve is varied, thus achieving control of refrigerating effect.

Maximum cooling capacity is achieved with the SelecTrol control knob turned fully counter-clockwise until the indicator on the knob is vertical in 12 o'clock position.

Minimum cooling capacity occurs with the knob turned fully clockwise until indicator is at 11 o'clock.

Refrigerant charge: Full charge is 2 lbs. of Refrigerant-12 in 1958 Monitor and Standard units, 2¼ lbs. in 1958 trunk units.

Service hints: All service suggestions on 1957 Mark IV units will apply to 1958 models with the noted exception that the 1958 Monitor employs a SelecTrol control valve instead of the RoboTrol valve.

Normally, little service should be encountered on the SelecTrol except that it may be necessary to replace the diaphragm or adjusting screw or reset the control knob mounted on the adjusting screw. Adjusting screw is fitted with collar and stops for maximum and minimum settings.

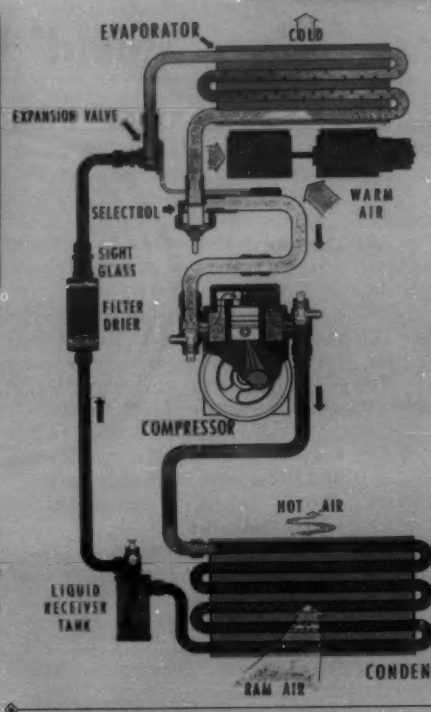

FIG. 2—Schematic of 1958 Mark IV "Monitor" system incorporating SelecTrol valve for temperature control.

Recold Copyrights The Word 'Dricon'

LOS ANGELES—The word "Dricon" joins the growing list of Recold copyrights, it was announced by H. T. (Hy) Jarvis, president of Recold Corp.

Recoid "Dricon" air-cooled condensers have balanced circuiting, large slow-speed, belt driven fans, and adjustable angle iron stand among their outstanding features, it was stated. Performance charts are available from the company.

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NHAW Convention-- 'Silver Shield' Program

(Concluded from Page 1, Col. 4) should price advantages and delayed billing arrangements be passed along to the wholesaler's customers, and the like.

Panelists in this session included W. L. Troescher, W. A. Swenberg, Saul Franklin, Grant Wilson, W. Chauncey Suter, Jr., J. W. Burge, E. J. Abel, and T. J. Delaney, Jr., with the moderator being Paul Courtney, executive vice president, National Association of Wholesalers.

'Cost of Services' Workshop Session

In the cost of services workshop session, the wholesalers heard discussion on such topics as charging for pricing service, returned merchandise, cost of selling broken cartons, minimum orders, accepting collect calls, value of "yellow page" advertising, transportation costs, insurance and inventory costs.

Serving on this panel, which was chairmanned by Roy Brainard of Standard Furnace Supply Co., were Floyd Doubleday, Ed. Pullen, Wm. Schoedinger, George Egan, Richard J. Young, J. S. Kimmel, Sr., and Clarence F. Ahrens.

Committee Reports

Various committee reports were presented at the NHAW general membership meeting. In addition to the previously mentioned air conditioning and distribution policy committees, the group heard R. J. Woodward summarize the extensive educational activities in four areas: (1) wholesaler sales training, (2) dealer sales "manageering," (3) dealer management institute, and (4) wholesaler executive management.

The group's insurance program for wholesaler executives now has well over a million and a quarter dollars of insurance in force, said Robert H. Swart, chairman.

In his annual report, John Robertson, retiring president, commented that most manufacturers have "enthusiastically endorsed" the previously cited resolution requesting statements of distribution policy from them.

Many Complaints Against Mfrs. Based on Rumor

"We wish to state, on behalf of the manufacturers about whom we have had complaints," Robertson emphasized, "that in a high percentage of cases when our staff ran them down, they proved to be only rumors. This is a lesson to get the facts before registering a complaint," he advised.

Heading the new slate of NHAW officers for the coming year is Oscar P. Brauer as president. Other officers are Harold W. Squire, president elect; John B. Allen, vice president; J. Orville Garrett, secretary; and R. B. Hesling, treasurer. W. R. "Wib" Bull continues as executive director.

Elected to the board of trustees were Seymour Cohen, Saul Franklin, Ben Carter, John Burnside, George Primich, Lee Haines, George Wheelock, Jr., James F. Primm, C. B. Buckley, Clare Smallcomb, and Gordon Bouskills.

(Concluded from Page 1, Col. 3) other heating contractors are "feeling the pinch," according to Louis Andrus, head of the Kalamazoo bureau.

"One of the biggest nonmember contractors is getting worried and now wants to join us," Andrus added.

Progress of the program this fall has been somewhat slower than anticipated due to an unforeseen event—the releasing of natural gas for 1,500 homes.

"If you have only 30 to 60 days to sell 1,500 systems, you don't worry about pushing Silver Shield," commented a panel member.

Praise for the Silver Shield program was voiced at the convention by industry and nonindustry executives. J. F. Biggi, manager of the National Wiring Bureau, for example, drew sharp parallels between the Silver Shield and adequate wiring programs, cautioning, however, that the main objective should be to improve installations, not merely to flood the country with Silver Shield labels.

William R. Reich of the American Institute of Management, whose critical "industry audits" of the furnace industry had many people up in arms in the past, declared that "Silver Shield indicates the industry recognizes its problems and is trying to solve them. This is a most important step. . . . The unscrupulous manufacturer and dealer should have fought the Silver Shield program. Where Silver Shield operates the unscrupulous or ignorant dealer will have an increasingly difficult time."

Similar views were voiced by M. A. Mott, president of the Cleveland Better Business Bureau.

Another feature of the convention consisted of taped interviews with Kalamazoo homeowners and builders who expressed their enthusiasm for the beneficial results obtained from Silver Shield systems.

Besides the convention activities devoted to Silver Shield, there was a preliminary report on first findings in the new Research Residence No. 4, progress and plans in revising the association's widely known manuals (plus some earnest headscratching on how to get more dealers to really use them), and a wind-up "problem solving session" where 10 panelists answered numerous questions.

Lyle C. Harvey, senior vice president, Carrier Corp., and John H. Brinker, vice president, A. O. Smith Corp., were speakers at luncheon sessions.

Tom Byrd, president, Lau Blower Co., was elected president of NWAHACA for the coming year, succeeding F. L. Meyer. First vice president is Joseph J. Decker, president, Air Conditioning Div., American Radiator & Standard Sanitary Corp.; second vice president is Harry C. Gurney, general sales manager, Janitrol Div., Surface Combustion Corp.

George Boeddener continues as secretary-treasurer and managing director with James Martin as his assistant.

Newly elected to the board of trustees were Charles H. Franke, president, American Furnace Co.; Harold Mueller, Jr., executive vice president, Mueller-Climatrol; Harold W. Mutz, president, Peerless Corp.; Wright Percival, president, Green-Colonial Corp.

The 1959 convention of the association will be held in St. Louis Dec. 3 and 4.

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